# RIDE EM, DON'T HIDE EM CLASSICS January/February 2020 ORIGINAL AND UNRESTORED, THIS 1967 TR6C TROPHY IS A SURVIVOR TRIUMPH

#### **PLUS:**

- CLASSIC SCENE: 2019 BARBER VINTAGE FESTIVAL
   YAMAHA'S PRODDIE RACER: 1960 YDS1 SCRAMBLER
- RIDING THE NEW KAWASAKI W800 CAFE



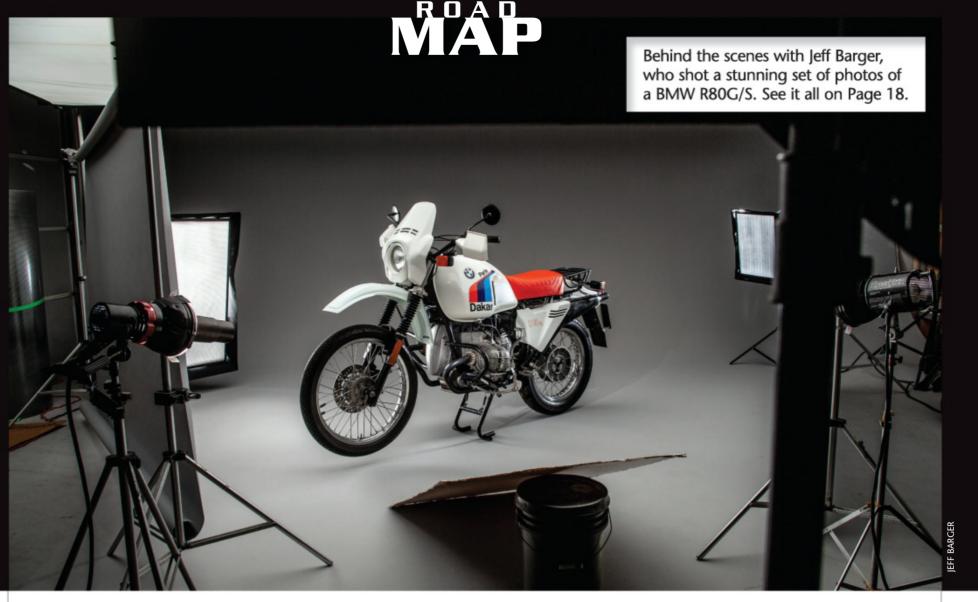
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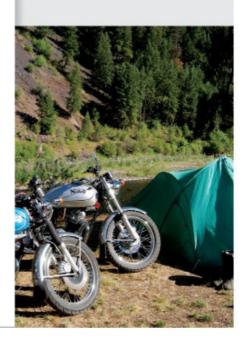
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# Thinking spring

With fall firmly here and winter trying to set in, any day the weather warms a bit I try to get out for a ride, knowing full well that any day now might be that last perfect ride of the year. Kansas winters can have their warm days, so I don't really completely take any of my bikes off the road for the winter, unless repair or upgrades mean pulling one apart for a time (which, well, happens every year at some point!).

This last weekend had one of those last great days, and I was determined to get my Norton out for a run. A favorite quick jaunt from Topeka is to head west on K4 towards Dover. I've ridden that road hundreds of times over the 20-plus years I've lived in Kansas, and it's always a good way to shake the rust off, whether it be mental or physical. The pavement is nice (unless it's particularly sandy or gravel-ridden thanks to farm trucks and trailers pulling stones up from the shoulders) and the road is full of sweeping, flowing curves and elevation changes. It's not the Tail of the Dragon, but it is about 15 minutes from my garage door.

I ran K4 out and back Saturday, then decided that the weather was just too perfect to call it a day. I was having too much fun, and dark was still an hour or so off, so I turned around and ran it

again, stopping to take a picture on the way home. It's always nice to have one of those photos to imprint on the memory, to keep you warm through the winter until temperatures rise and the streets are clean again.

If you're willing to travel a bit, winter doesn't really have to set in at all. If you can make it to Florida, I encourage you to head down to the 14th Annual Dania Beach Vintage Motorcycle Show on Saturday, Jan. 25, from 10 a.m. to 5 p.m. at Frost Park. It's free to attend, with an affordable fee to enter your bike in the show if you wish. The numbers seem to grow each year, and they're getting close to having 400 motorcycles enter the show.

Whether you make it to Florida or not, spring will be here before you know it. Now is the time to think about what your bike needs to be ready when the warm weather returns. I've decided my Norton is due for some shocks before spring, along with a couple other tweaks. What bike projects are you working on this winter? Send me a note at lhall@motorcycleclassics.com, and a photo too!

Cheers,

Landon



# Motorcycle

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#### READERS AND RIDERS

# "My fate was sealed — I had to have it."

#### **Another Fastback**

When I graduated from high school in 1971, I got a summer job at a furniture factory in neighboring Winooski, Vermont. Just down the road lived a British racing green 1968 Norton Commando Fastback. With the factory windows always open, I could hear whenever that glorious machine was approaching, and I would drop what I was doing to watch it pass by. When I noted a "For Sale" sign on the bike while headed home one day, I had worked long enough to stash the necessary cash — so I bought it that day.

I got a couple of months of riding in before turning the bike over to a mechanic for a tuneup. A mutual acquaintance attempted to steal the bike from the mechanic's shop, and exposed wires around the ignition remained when I got the bike back. To celebrate its return, I took a wonderful ride from Burlington to Stowe, through Smugglers' Notch and returned the back way on Route 15. I parked the bike wearing a huge satisfied smile — as an errant drop of gas dripped from the air filter-less carburetors onto the bared ignition wires and POOF — we are now dealing with an 8-foot fireball threatening to ignite the house! In my panic I quickly learned that a cereal bowl full of water was no match for the inferno, and in a few moments absolutely nothing salvageable remained.



Steven Herberg's recent acquisition, a Norton Commando Fastback.

Marriage and too many (20+) bikeless years followed before Harley turned 100 and I turned 50, demanding the purchase of my first new H-D. More recently I've teamed up with a group of guys doing a weekly wrench night on vintage (primarily British) bikes. After selling the 1976 Trident that we had revived, it was time for a new project.

Last year one of the members showed up with pictures of a Fastback exactly like the one I had lost, for sale a few miles down Route 7. My fate was sealed — I had to have it, and I bought it within

a few days. Everything needed adjustment and all of the fluids were changed. I have about 100 wonderful miles on it so far, and it feels like I'm 18 again. Tonight the new front

brakes get their final adjustment as we watch the fall weather moving in.

Steven Herberg/Richmond, Vermont

Steven,

First, congrats on your new ride. Having had a Fastback all those years ago, you knew exactly what you were in for this time, but we are glad to hear it's just a good as you remembered. Enjoy it, and thanks for reading Motorcycle Classics! — Ed.

#### Tomorrow's classics

I was excited to see the Kawasaki W650 featured on your website as a Best Bet on Tomorrow's Classics. I recently started riding and wanted a classic-looking standard motorcycle without having to take a wrench to it every time I wanted to ride. I looked far and wide



#### **Good memories**

Wow, your September/October issue featuring the 1966 650 Triumph and the Honda CL90 sure brought back so many good memories for me. When I was 12 years old I owned a little CL90. My family would go camping in the national forest in Washington, Idaho and Montana. We geared down the CL90 with a big sprocket on the rear wheel, which gave the bike more torque at lower speeds. Top speed was about 30 miles per hour, but the bike could climb steeper hills. When I was 18 years old I bought a used 1966 650 Triumph and used it as a street bike for about 20 years. Today I ride a Yamaha TW200 trail bike (see photo). Keep up the good work in bringing back so many good memories for your readers.

Mark Johnson/via email



#### Speaking bikes

I read the column about bikes that speak to you (Shiny Side Up, September/October 2019) and I do have one of those bikes: My buddy's 1984 Harley-Davidson FLH Shovelhead did this to me. I've watched him rebuild it starting in about 2000, and go through several iterations, and had many chances to ride it. It made me absolutely want a Shovelhead, mainly, for how they sound. As far as I'm concerned, these were the pinnacle of Harley-Davidson engines, and motorcycles. Fast forward to 2018, I finally have my own Shovelhead, a 1979 FEXF. I also have a 1974 Triumph Trident and a 1969 Triumph Trophy TR25W. Thanks for the magazine. I enjoy it.

Will/via email

#### More speaking bikes

After decades of riding, racing and loving bikes, I rode my friend's 1975 Yamaha XS650 one day. I pulled out of the driveway, up the hill grabbing gears and twisting the throttle, when it struck me. I've got to get one! I looked and looked for an early '70s model, because the early '80s XS's, though plentiful, and even though basically the same with a torquey engine, can be rather boring in style with cast wheels, smaller preset carbs, etc. Then I found a 1970 first-year green XS650 in Wisconsin. It was big money and a long drive, but it has low miles, a clean title, the original tires, manuals and it is just cool as hell. I love it, and it turns heads wherever I go, but mostly it is just a joy to ride.

Teddy Horn/Fort Myers Beach, Florida

for a W650 with no luck.

Eventually I settled on a Suzuki TU250X and I couldn't be happier. It is a great bike, and I would love to know what your magazine thought if you ever get a hold of one. The W650 was before its time, I believe, as more motorcycle manufacturers are going back to the classic vintage look. I'm looking forward

to the CB1100F (I wish it was a 4-into-4 exhaust and spoked wheels) and hopefully the Yamaha SR400. I know you probably don't think many readers are 26-year-old females, but I love your magazine. As soon as I get it in the mail, I count down the days until the next one comes out. Keep up the great work.

Courtney E./Nashville, Tennessee

Courtney.

We are glad to hear you've been enjoying uour TU250X. While we haven't had a chance to ride one just yet, from everything we've read, they do sound like a great bike. We do hope to test one in the future. Keep your fingers crossed! In the meantime, check out John L. Stein's test of the new Kawasaki W800 on Page 34. — Ed



#### Guzzis!

I just picked up the new issue and loved the pic of you and the V7 on Page 4 (Shiny Side Up, November/December 2019). You suggested pictures, so here is mine, a 1973 Moto Guzzi Eldorado. It is, by far, the best vintage machine I have ever owned!

Al Zinn/Painesville, Ohio



Hey, loved your pic in the new issue (Shiny Side Up, November/December 2019). I own four loop-frame Guzzis and have had more Honda 350 and 400/4s than I can count. This pic was taken yesterday, after a nice Sunday rip around Portland, Oregon. Cheers!

Patrick Buss/via email

# RADAR

# **Mercury Rising: Norton's Forgotten Featherbed**

When the 750 Commando was launched at London's Earls Court motorcycle show in 1967, cynics were quick to point out that Norton had ditched the best feature of its heavyweight motorcycle range — the sweet-handling Featherbed frame — and retained its main liability — the 20-year-old parallel-twin engine. But the Commando, with its vibe-killing Isolastic frame, was such a success that by 1969 the remaindered items in the company's parts inventory included Featherbed frames and a quantity of 650cc engines from the Manxman and 650SS. What to do?

The result was the Norton you've never heard of — the 1969-1970 Mercury 650. Although no doubt intended to clear out Norton-Villiers' stock of pre-Commando parts, the company created what is some-

times described as the nicest Norton ever. The long-stroke 650cc engine was considered the best development of Bert Hopwood's 1949 parallel-twin. The largest capacity version, the 750 Atlas, produced such teeth-loosening vibration in the Featherbed that it was first sold as a mild-tune, low-compression tourer. The 750's tuning potential had to wait for the Commando's Isolastic frame. But the 650 worked beautifully in the Featherbed chassis, either in standard 650 Manxman form or as the dual-carb 650SS.

The Featherbed famously started out as a race chassis for the Norton Manx. It was a full duplex cradle frame made from chromemoly tubing, strengthened with cross braces, triangulated around the headstock, and bronze welded. A rear subframe was welded on to support the swingarm suspension and dual shocks. The Featherbed was more expensive to manufacture than traditional lug-and-braze frames, so its introduction to Norton's production twins wasn't completed until the late 1950s. The production-bike frames adopted mild steel tubing rather than chrome-moly, and (after 1960) featured top tubes that swept inward behind the gas tank for more comfortable seating. The earlier frames were known as "wideline," and the later as "slimline."

The 650cc engine fitted to the Mercury's "slimline" Featherbed



frame was a development of the 1949 Model 7 Dominator 500cc OHV parallel twin. Unlike Triumph's 500 twin, the Norton engine used a single camshaft driven by chain from a half-time pinion, making it mechanically quieter. Pushrods were fully enclosed in the cylinder casting, and the cylinder head incorporated the rocker boxes, reducing the opportunity for oil leaks. The 500 became the Dominator 88 in 1953 (in the Featherbed frame) and was joined in 1956 by a 600cc Dominator 99 with an alloy cylinder head. The first 650 was the cruiser-style 1960 Manxman, intended for the U.S. market, though a "home" market 650SS with lower bars and twin carburetors followed in 1961.

Why it took Norton so long to build a full 650cc bike is bewildering when the company must have been losing sales to 650cc BSAs and Triumphs. AMC, Norton's parent company after 1952, also stuck to 600cc for their Matchless and AJS twins until the 650cc G12 and Model 31 of 1958 — even though 650cc had been the class benchmark since Triumph's Thunderbird and BSA's A10 Golden Flash of 1949. The Mercury appeared in 1969 in a striking Atlantic blue paint scheme (oil tank, toolbox, fenders, primary chain case and chain guard) with a silver gas tank and chrome badges. A black finish with red or silver gas tank also seems to



# ON THE MARKET 1970 Norton Mercury

Our feature bike, shown at the top and at left, is also one of just two copies of the Mercury that have come up for sale in recent years. Frame number 18129803, it was a past winner of the San Jose Clubman's All-British Show People's Choice Award. At the 2017 Mecum Las Vegas Motorcycle Auction, it was bid to \$9,000, but apparently did not sell. More recently, the 2019 Mecum Las Vegas auction featured an original, unrestored 1970 Mercury, which was part of the MC Collection of Stockholm. It sold for \$9,900, on an estimate of \$18,000-\$23,000.

#### "The Mercury benefited from many of the Commando's internal upgrades."

have been available, and stainless steel fenders were an option. The rest of the chassis and running gear were traditional Norton including the Roadholder front fork — though the Mercury was fitted with an 8-inch single-leading-shoe front brake (not the twin-leading-shoe brake from the Commando) and a tachometer was optional. However, there are many Mercuries around with the TLS brake, though whether retrofitted (a straightforward modification) or from the factory isn't clear. A tachometer could also be

added but required fitting a drive gear from the camshaft behind the timing cover blanking plate.

Though superficially similar to the earlier Manxman and

#### **NORTON MERCURY 650**

1969-1970 Years produced 47hp @ 6,800rpm Power 110mph est. Top speed 646cc (68mm x 89mm) air-cooled, **Engine** OHV parallel twin **Transmission** Chain primary, wet multiplate clutch, 4-speed, chain final drive Weight/MPG 408lb dry/NA \$4,000-\$12,000 Price now

650SS engines, the Mercury benefited from many of the Commando's internal upgrades, and featured 12-volt electrics with capacitor ignition for battery-less emergency starting. A single Amal Concentric carburetor was fitted. Unfortunately, the Mercury retained the leak-prone sheet metal primary cover: the Commando's alloy primary case worked much better in that respect.

But the result was a well-balanced motorcycle with superior handling, enough power for spirited touring, and

improved reliability. That, and the fact that only around 750 copies of the Mercury were built, means they've now become desirable and collectible. MC

## Parallel-twin alternatives to the Norton Mercury

#### 1966-1970 Kawasaki W1/W2

Though U.S. and European manufacturers often accused the Japanese of copying their products, in the case of the 1966 Kawasaki W1, they had a point! When Kawasaki acquired Meguro in 1964, they also got the K1, a 500cc air-cooled OHV parallel twin that was essentially a reverse-engineered BSA pre-unit A7 twin. Stretched to 624cc, the K1 became Kawasaki's W1 of 1966. But like many "copied" Japanese products, the W1 was in many ways better than the original. For example, the W1 replaced BSA's suspect plain bush bottom end with a built-up crankshaft, ball and roller bearings and improved oil feed. Breathing was also revised to reduce the potential for oil leaks. The separate transmission had four gears in an N-1-2-3-4 pattern with the shifter on the right. The drivetrain went into a sturdy duplex cradle frame with a telescopic fork, a dual spring/shock rear, and a TLS front

- 1966-1970
- 50hp @ 6,500rpm (claimed)
- 101mph (W1, period test)
- 624cc (74mm x 72.6mm) aircooled, OHV parallel twin
- Chain primary, wet multiplate clutch, 4-speed, chain final drive
- 476lb (curb, w/half tank of fuel)
- \$1,195 (1966)/\$4,000-\$14,000

drum and SLS rear drum brakes. The W1SS of 1968 got dual 28mm Mikunis, and the restyled W2SS of 1969-1970 had more compression and three more horsepower. Cycle liked the overall finish of the W1, "... being made with more than the usual care," and concluded: "On balance, a very good motorcycle."

#### 1967-1970 BSA 650 Thunderbolt

Ironically, BSA had been building its successor to the pre-unit 650cc A10 Golden Flash for five years before the W1 appeared in the U.S. More of a makeover than a completely new machine, the A65R Rocket arrived in 1962 with "over-square" bore and stroke dimensions (compared with the long-stroke A10). The combined engine and transmission unit featured smooth, rounded lines, and quickly became known as the "power egg."

The Rocket morphed into the single-carb Thunderbolt and twin-carb Lightning, both with more power and more vibration. To fully exploit its considerable performance, the short-stroke engine had to be revved. And with the revs came enough vibration to destroy headlight bulbs and defeat testers' attempts to determine top speed! By 1969, the Thunderbolt had gained the excellent BSA/Triumph TLS front brake, and also featured

a reasonably sound engine, solid handling, ever improving reliability and strong performance up to around 75mph above which the vibration became debilitating, 1970 was the last year before the Thunderbolt acquired BSA's controversial oilbearing frame.

- 1967-1970
- 46hp @ 7,000rpm
- 104mph
- 654cc (75mm x 74mm) air-cooled, **OHV** parallel twin
- Chain primary, wet multiplate clutch, 4-speed, chain final drive
- 385lb (dry)
- \$1,199/\$3,500-\$9,500





# SIDECAR

# 2020 Las Vegas vintage motorcycle auctions return

### 2020 Las Vegas auctions

Auction houses Mecum and Bonhams are busy preparing for the 2020 Las Vegas motorcycle auctions.

Mecum will return with another massive portfolio of bikes, with a reported 1,750 machines scheduled to go under the hammer during their six-day mega-auction, Jan. 21-26, at the South Point Hotel, Casino & Spa. Headlining the Mecum auction (mecum.com) are eight individual collections, including The Hamilton Triumph Collection, The Stephen Ross Estate Collection, The Northwest 100 and more. The Northwest 100 is a particularly interesting group of

100 rare and desirable vintage Honda motorcycles, collected over the years by Brown. M. Maloney. Nearly all of the 100 bikes are in top, unrestored condition.

Also on auction will be the famous "Greenie" 1940 Harley-Davidson EL Knucklehead. Formerly part of the Wayne "Pappy" Pierce collection, it's lauded as arguably the finest original paint 1940 Knucklehead in the world. Once thought to be an incorrect or customized bike, the current owner searched for a year and a half to gather the original documentation to prove that it is an



"Greenie," the famous Knucklehead, will go across the block at the Mecum auction in January.

original machine, ordered from the factory with Hollywood Green paint, nickel plating instead of chrome, and other extras.

Bonhams' one-day auction (bonhams.com) takes place at noon on Thursday, Jan. 23, at a new location this year: Caesars Entertainment Studios, located behind Bally's, just off the famous strip. This new location offers more space and better accessibility than its prior location, along with plenty of parking. As always, an impressive selection of collectors' motorcycles of every vintage is expected to be offered at this internationally

attended sale.

"If there was ever an auction at which to offer the world's best motorcycles, this is it," says Craig Mallery, Bonhams Motorcycle Specialist. "It was here in Las Vegas where we set the world auction record for the most valuable motorcycle ever sold — the 1951 Vincent Black Lightning for nearly \$1 million."

Bonhams is also excited to announce a new member of the West Coast Motorcycle Department, Mathieu Guyot-Sionnest. A native of Paris, France, and a lifelong motoring aficionado, Mathieu is a classic car and motorcycle racer, racing with AHRMA and WERA.



The ex-Steve McQueen 1938 Triumph 5T Speed Twin sold for \$175,500 including premium at the 2019 Bonhams auction in Las Vegas.





# 1967 Triumph TR6C

Story by Margie Siegal Photos by Nick Cedar



To say that Southern California's Big Bear Run was a popular race in the 1950s is an understatement.

In 1958, there were 851 entries for the offroad, mostly desert race, despite the fact that it was a really tough trip. Only 145 riders finished, with Bud Ekins taking the win. Ekins, the other top five finishers, and the majority of the other riders on the track were aboard Triumphs. The model chosen by most competitors was a single carburetor 649cc twin with high pipes and an easily detachable headlight — a Triumph TR6. Racers called it The Desert Sled.

"Over a period of several years, Scott has put together a collection of all four of the 1967 Triumph 650s."

No one quite knows how a bike set up for racing in the arid badlands became known as a Desert Sled, but the name stuck. Single carburetor 650cc Triumphs rocked and rolled Southwestern desert racing through the 1950s and 1960s. If you wanted to compete in the Catalina Grand Prix, the Greenhorn Enduro, the Barstow to Vegas run, and the hare and hound racing that was sponsored by several of the local clubs, you went out and bought a TR6, with the high pipes. Prominent racers Ed Kretz, Jr. and Eddie Mulder, and racer turned movie star Steve McQueen ran Triumph TR6s. Even Elvis Presley was photographed riding one through a pond.

The bike that was filmed doing that jump in The Great Escape was a Triumph TR6C — the 1960s version of that high piped, single carb 650. It is now on display at the Triumph factory in Hinckley, Great Britain. Although Steve McQueen did most of the riding in the movie (and doubled as some of the German guards chasing McQueen's character) Bud Ekins did the jump as a stunt double for McQueen after the producer had a fit about the star doing his own jumps.

Most riders kept the engine stock, but rewired the machine, replaced the stock fenders with sheet steel, added a serious skid plate, removed the mufflers and re-shoed their ride with a Dunlop 4 x 19-inch Trials Universal in front and a 4 x 18-inch Sports Knobby in back. More serious competitors might alter the chassis, add tucked in pipes and upgrade the shocks.

#### Our feature bike

This particular 1967 TR6C was purchased from Burbank Triumph in Southern California, and still has the Burbank Triumph license plate holder. Jack Hateley, (father of racer John Hateley) the owner of Burbank Triumph, was Eddie Mulder's sponsor. The first owner of this bike was a prison guard who wanted to ride in offroad events. Unfortunately, he soon learned that he had bought the wrong motorcycle. By 1967, all his friends were riding lightweight 2-stroke Husqvarnas offroad. The owner wanted to be competitive with his friends, so he bought a Husky for competition and rode to work on his Triumph. A short time later, he was out with his buddies after work (he said he only had two beers) and fell over in the parking lot. The owner's wife banned riding to work after that.

Fast forward 30 years. The bike had been passed on to the first owner's nephew. The nephew understood that he had something special, but he was married, his wife was eight months pregnant and they had no medical insurance. The bike was the only thing that they could sell, so the nephew put a "For Sale" ad in the local free paper. Scott Dunlavey saw the ad and brought home the bike in a pickup truck. It took a minimum of work to get it running, and Scott has prized it — and ridden it — since then. "I rode this 6C to my wedding. My in-laws saw the bike and wanted to ride it. They had a great time taking turns riding around the block on it."

#### Triumph fan

Scott Dunlavey started messing around with Triumphs when he was in high school. This soon led to him starting a racing career, carrying National flat track racing number 96 and becoming a serious desert racing competitor. His best result was third overall and first in the Over Thirty class in the 2001 Baja 1000. As time went on, Scott began to concentrate on the wrenching and organizing end of the race team effort. He was hired as builder and logistics adviser for the movie Dust to Glory in 2003. "The Dust to Glory motorcycle [a race-prepped Honda XR650R] is in my garage." Scott has also worked with Honda Racing and Johnny Campbell Racing on the Baja 1000, and has built engines for numerous racing efforts. "I get screams for help from as far as Colorado." Eddie Mulder is his daughter's godfather.

Since 1987, Scott has also been a partner in the Berkeley, California, Honda, Yamaha and Husqyarna

motorcycle dealership. He has never lost his soft spot for Triumphs, though, and works on and rides them in his off hours. "I am blessed that I can work on them. There are several other businesses near my shop who can help with a restoration. There is such a high level of knowledge around here." Although Berkeley, California, has a reputation as a college town, there

1967 TRIUMPH TR6C TROPHY

Engine: 649cc air-cooled OHV parallel twin, 71mm x 82mm, 9:1 compression ratio, 45hp @ 6,500rpm

Top speed: 90mph (est.)

Carburetion: Single Amal Monobloc 389/239 carburetor

Transmission: 4-speed, chain final drive Electrics: 6v, energy transfer system Frame/wheelbase: 55.5in (1,410mm)

**Suspension:** Telescopic forks w/dampening rods (only used on TR6Cs and TT Specials) front, Girling dual shocks

Brakes: 8in (203.2mm) SLS drum front, 7in (178mm) SLS

drum rear

**Tires:** 3.5 x 19in front, 4 x 18in rear **Weight (dry):** 360lb (163.6kg) **Seat height:** 30.5in (775mm)

Fuel capacity/MPG: 2.5gal (9.45ltr)/40mpg (est.)
Price then/now: \$1,150/\$6,000-\$15,000

is an industrial area that is home to wizards in metal fabrication, welding, engine building and paintwork.

Over a period of several years, Scott has put together a collection of all four of the 1967 Triumph 650s, including this TR6C Trophy. This bike is extra special — it was never modified for racing, never beat up over rocky trails and has never even had the cylinder head off. To say that this bike is a survivor is an understatement. From headlight to taillight, except for the tires, this bike is original. It also runs and rides well.

#### The U.S. market

Triumph had been building bikes expressly for the U.S. market since 1949, when the company came out with the 649cc Thunderbird, an enlarged version of Edward Turner's Speed Twin. The 500cc Speed Twin had transformed the British motorcycle industry in the 1930s, but it was underpowered for long American roads. A sports version of the Thunderbird, the Tiger 110, with swingarm rear suspension, appeared in late 1953.





Another Triumph product popular in the U.S. was the TR5 Trophy. a 500cc twin with high pipes that could be used in offroad events with some quick wrench work. The headlight was attached to the wiring harness with a multi-pin connector: all the rider had to do was pull it out and find someplace safe to put the headlight.

Someone at Triumph had a brainstorm, and announced the TR6, at first called the "Trophy bird," a name that was shortened some years later to Trophy. Basically an upgraded Thunderbird engine shoehorned into the TR5 frame, the first-year-model 1956 TR6 had an aluminum alloy head, the quick connect headlight, a 3-gallon gas tank and a wider back tire. The frame and forks were also improved, with a redesigned steering head on the frame and changes to the forks to prevent bottoming out under heavy braking. 1957 saw a full width front hub, a Lucas competition magneto and an 8-inch front brake. The TR6 now came in an

"A" (street) version, a "B" (scrambler) style and a "C" (economy) model. 1959 saw a new forged crankshaft and a new frame with dual downtubes. Edward Turner, still very much in charge at Triumph, was at the 1960 Big Bear race (won by Eddie Mulder, see sidebar) when a young rider died after the frame on his Triumph broke. Turner went back to England and ordered that the steering head be beefed up.

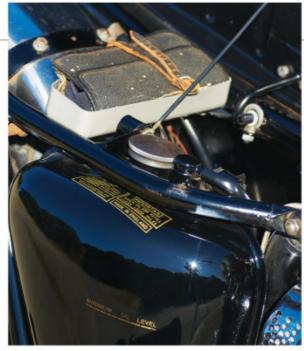
In 1961 and subsequent years, the "C" model was the scrambler, with high pipes. Meanwhile, Triumph had started producing the dual carburetor Bonneville, to much praise and high sales. The company took the Trophy out of production for a few months to revamp it as a single carburetor version of the Bonnie, with floating brake shoes, sports fenders and battery and coil ignition. By the end of 1962, the TR6C was back, with a unit construction engine, and an aluminum cylinder head with larger fins. The



The Triumph still wears its original paint and decals (above). If the odometer is to be believed, this bike has just a little more than 1,300 original miles on it.









Amazingly, the original tool kit is still present (middle). The high-pipe exhaust, complete with leg shields (right).

frame reverted to a single downtube in 1963. This new frame and a rebalanced engine reduced vibration.

Triumph had two U.S. importers during the late 1950s up through the 1960s: Johnson Motors (popularly referred to as JoMo) in the West and TriCor in the East. Motorcycles intended for the West Coast market often had different colors and trim than East Coast Triumphs. In 1963, in response to requests from Triumph's West Coast distributor, Johnson Motors, Triumph started producing the TR6SC, a factory Desert Sled, with straight pipes, no headlight and alloy fenders. Unavailable on the East Coast, the TR6SC boasted 45 horsepower and came with a centerstand and a parcel grid on the tank, both items not included on the TR6C. A contemporary Cycle World test praised the bike. "It's such fantastic fun to ride," said the report, "with more hair on its chest than King Kong."

Turner retired in 1964. That was the start of a downward spiral at Triumph, as the company began to be run by committees of managers who had no experience with motorcycles or motorcycle people. These "scientific" managers made some very expensive mistakes, the most serious of which was failing to upgrade the machinery that actually made the motorcycles. As a result, the British product began to fall further and further behind their European and Japanese competitors in both quality control and

product innovation. The fact that by the late Sixties Triumph was no longer the bike to ride in competitive offroad events was only one symptom of a general malaise.

#### In the flesh

This TR6C was built in 1967 before the rot really started to set in. Scott says that the '67 was the last competition-oriented TR6C. "Later bikes were posers and street scramblers." It has the 649cc engine that Edward Turner believed to be the largest that a vertical twin engine could be built and still provide a comfortable ride, a 9:1 compression ratio, an ET (energy transfer) batteryless ignition system, improved drum brakes, telescopic forks with dampening rods (only used on TR6Cs and TT Specials), and a better oiling system. The slimline tank held 2.5 gallons. It came only in a pretty mist green and white. Scott's bike runs fuel through an Amal Monobloc. Later in the model year, the carburetor was changed to an Amal Concentric. "It's super rare to find an ET that works," Scott says. "1967 was the last year. I rebuilt it, and it should have taken me three hours, but I was rusty. It took me eight."

Two years after this bike was built, Honda pulled the curtain back on the 750 Four, with overhead cams, an electric start and a front disc brake. Honda was able to manufacture the Four at a



Eddie Mulder (left) on his Triumph with builder Pat Owens in 1965.

# Legend Eddie Mulder remembers desert racing in the 1950s and 1960s

Eddie Mulder, AMA Hall of Fame inductee and National Number 12, got his start desert racing in the high country east of Los Angeles. The son of the Lancaster Triumph dealer, he rode his first desert event at the age of 8. When his Triumph Cub broke down, he got picked up by none other than Dot Robinson, Motor Maids president at the time and top offroad racer. "She hauled me in. I kept poking her shoulder, "You're going too fast!"

Eddie soon learned to go fast himself. He won his first desert race at the age of 15, with a last minute pass on Bud Ekins. At the time, Eddie's father had sold his shop and was working as the parts man for Bud Ekins' Triumph dealership. Shortly afterwards, Eddie went to the dealership

with a broken gearbox and asked Bud if he could find a replacement. Bud said he wouldn't replace the gearbox, he would introduce Eddie to Johnson Motors, the West Coast Triumph distributor. Johnson Motors agreed to help Mulder. "Shortly afterwards, I had three brand-new Triumphs." Mulder won the 1960 Big Bear race and then went into flat track competition. "Flat track was where the money was." After he hung up his iron shoe, he started doing stunt work for film studios. "Bud Ekins introduced me to the right people in the film industry too."

"In the old days, the motorcycle clubs put on all the races. In my area, there were the Checkers (my club). Shamrock and SoCal, among others. Races were more of a social event, and

Despite the fine original condition of his Trophy, owner Scott Dunlavey isn't afraid to ride it.

reasonable price due to a massive investment in modern machine tooling. Triumph, still running on machine tooling from the 1950s, went from being the bike everyone wanted to ride to a minor player bought by a niche market of enthusiasts. After a great deal of turmoil, including a sit-down strike by the workers and transformation into a cooperative, Triumph went out of business in 1983. The trademarks were bought by John Bloor, who made the investment in a state-of-the-art factory and the best engineers locatable that Triumph should have made 20 years earlier. As a result, Triumph is, once again, a popular motorcycle.

The fact that this TR6C has survived 52 vears "unmolested." as Scott Dunlavev says. has not caused its new owner to put it in a nitrogen-filled box. "I took it to Pikes Peak, where I was racing, to ride up and down the hill. Eddie Mulder saw the bike and said. "Holy crap — don't touch that bike!" I was riding it around the Lake Cachuma rally and John Healy (head of the Triumph International

Owners Club) saw it. He said, "Don't touch that bike!" I am not going to restore this bike. Not only does it not need it, but those guys would kill me."

Although Scott would never dream of restoring this TR6C, he still changes the oil and checks the timing — he wants it to continue to run well. "You have to stay on top of the maintenance. Replace worn items BEFORE they fail. Don't let the bike sit with ethanol fuel in the tank." He likes Kendall 20/50

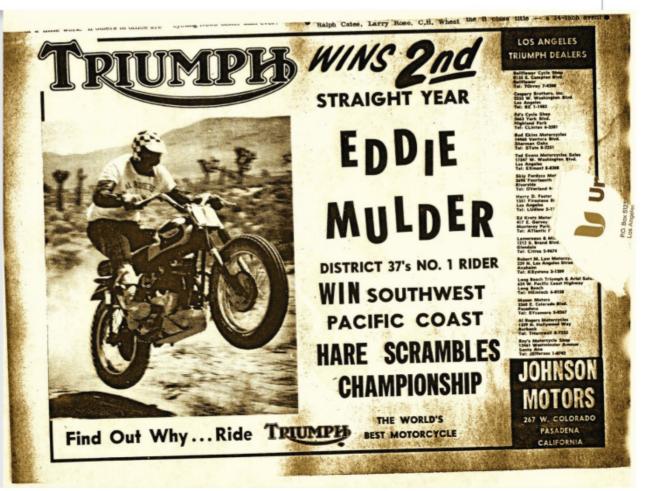


oil, and changes it every thousand miles. "It's a constant labor of love."

"The 6C has tons of low end torque, no centerstand and solid mount bars. It's not as nice of a street driver as the Bonneville, but single carb bikes are sweethearts. The mist green tank is gorgeous. It's THE Triumph dirt bike, and the last of Triumph's real competition bikes. Anyone with a dirt background appreciates this bike. This motorcycle needs to survive." MC

people brought their families. Most of the racers were guys in their 20s and 30s, although a few women raced. All sorts of people would show up. I remember once I got to the finish line, and there were Steve McQueen, Keenan Wynn and Lee Marvin, drunk as skunks. It was almost all British motorcycles — about 80 percent Triumphs, mostly TR6s. Some people had BSAs or Ariel Red Hunters, and there were a few Nortons."

"It was fun — a whole different atmosphere. It didn't get too rowdy, because people had their families there. It was also a whole lot cheaper to race than it is now. There were no toy haulers, no motor homes. A brand-new Triumph was \$800 and gas was 21 to 23 cents a gallon. The clubs would compete — it was club versus club — but everyone watched out for each other. If a bike broke down, someone would go get them and haul them in with a rope." — Margie Siegal



# READY FOR ADVENTURE

1987 BMW R80G/S

Story by Greg Williams Photos by Jeff Barger

Charley Boorman and Ewan McGregor, this one is all on you.

When Matt Balestrieri first saw an episode of Long Way Round, he knew his dad, Jim, would love the 2004 adventure where Charley and Ewan essentially circumnavigate the globe from London to New York City aboard a pair of BMW R1150GS motorcycles. Matt bought his dad the series on DVD, and Jim bingewatched the episodes.

"You know, it was winter in Wisconsin," Jim laughs, and adds, "so I watched them again. It was just great stuff."

He followed this up by watching Charley Boorman's attempt to race in the 2005 edition of the Dakar Rally and then took in the 2007 series Long Way Down — another Charley and Ewan adventure.

Jim later bought himself a 2010 BMW R1200GS at auction and says he was amazed by the riding experience. He became seriously intrigued by the motorcycles he saw Charley and Ewan punish in some rather grueling off-road conditions — but were stable and comfortable on long stretches of good pavement. He wanted to understand the background of these adventure bikes and dove deep into BMW history.

What he discovered was a lineage that traces back to 1980. That's when BMW introduced its R80G/S (for Gelände Strasse, or loosely translated, off-road/on-road). In the early 1970s, on the automotive side of its manufacturing business, BMW made a statement with its 2002 series of cars that helped put the company on a path towards profitability.

By the end of the 1970s, though, the same could not be said for the motorcycle side of the business. While the company produced well-executed motorcycles with its R-series of flat twin, air-cooled machines, BMW Motorrad was bleeding money. By 1979, freshly appointed BMW Motorrad director Karl Heinz Gerlinger was told to turn the ship around, or else face the proposition of shuttering the factory.

#### Racing roots

In Ian Falloon's tome The Complete Book of BMW Motorcycles, Falloon says BMW had been successful in the early-1970s racing modified flat-twin machines in off-road events. This included Herbert Schek taking the top spot in the over-500cc German off-road championship from 1970 to 1972; Schek was campaigning a modified R75/5.

"Schek also won gold medals in the 1971 and 1973 ISDT events, but generally the BMWs struggled against the lighter Maico two-strokes." Falloon writes in his opening notes about





the development of the R80G/S model.

He goes on to say that in 1978, a new over-750cc off-road race class prompted BMW to officially return to the dirt with a competition-only 872cc machine. Championships were won, and the team behind the model showed it to Karl Heinz Gerlinger, who, perhaps recognizing the potential for the large dual-purpose motorcycle, authorized development early in 1979.

Falloon writes, "With limited developmental time available, the enduro intentionally drew on existing designs. Rüdiger Gutsche headed the project, and as Gutsche

was an ISDT veteran on his own special R75/5-based enduro, this undoubtedly sped the development. Only 21 months after the project got the go-ahead, the R80G/S was officially presented and sold more than 6,000 in its first year of production."

The new BMW utilized a modified R80/7 engine, this model having taken over in 1978 from the R75/5. For the new G/S, the R80/7 engine was upgraded with a 9.9-pound lighter single-plate



#### 1987 BMW R80G/S PARIS-DAKAR

Engine: 797.5cc air-cooled OHV opposed twin, 84.8mm x 70.6mm bore/stroke, 8.2:1 compression ratio, 50hp @ 6,500rpm

Carburetion: Dual 32mm Bing CV Transmission: 5-speed, shaft final drive

Electrics: 280-watt alternator, 12v 16ah battery, electronic ignition Frame/wheelbase: Twin-loop steel tube, 57.7in (1,465.5mm) Suspension: Telescopic fork front, single-sided Monolever rear Brakes: 10.2in (259mm) disc front; 7.9in (200mm) drum rear

Tires: 3 x 21in front, 4 x 18in rear Weight: 437lb (199kg) w/half tank fuel

Seat height: 33.6in (853mm) Fuel capacity: 8.3gal (31.4ltr)

Price then/now: \$4,800 (1981)/\$15,000-\$25,000

diaphragm clutch and flywheel, a lower compression ratio with nickel-lined aluminum cylinders and a Bosch electronic ignition system. Overall capacity was 797.5cc and the pushrod-operated engine with dual valve heads produced 50 horsepower at 6,500rpm and a good 56lb/ft of torque. Air flowed to dual Bing constant velocity carburetors through a filter mounted in a plastic airbox.

Dual exhaust pipes joined a collector under the back of the engine, where they merged and exited in a single pipe to a muffler mounted high on the left side of the bike. While the R80G/S came with a kick-

starter, an electric starter was optional in overseas markets. In the U.S., the bike came with both.

In a March 1981 Road Rider magazine test, writer Clement Salvadori says, "The basic machine comes with a kick start, but all models brought into the United States will have the optional electric starter included. I like the ease of pushing a button, but I also like the idea of having a kick starter. Just in case."





#### Frame and suspension

The twin-loop steel frame started life as one from an R65 model, but it was modified and there was a significant difference at the back end of the machine. Instead of dual shocks on each side of a swingarm, Gutsche constructed a stout single-sided swingarm called the Monolever that was suspended by a heavyduty Boge shock mounted on the right side of the bike. Overall, the Monolever shaved some 4 pounds off a standard BMW setup. Also unique to the Monolever system was the newly designed rear hub, laced as it was into an 18-inch Akront alloy rim, which

could be quickly and simply removed by undoing three lug nuts, automotive-style.

Up front, a 36mm fork had similar internals to that of the R65 but featured leading-axle lower legs that were set up to accommodate twin discs — although production R80G/Ss came equipped with a single 260mm front disc in a 21-inch wheel that again featured an Akront rim. Front suspension travel was 7.9 inches while the Monolever would move 6.7 inches.

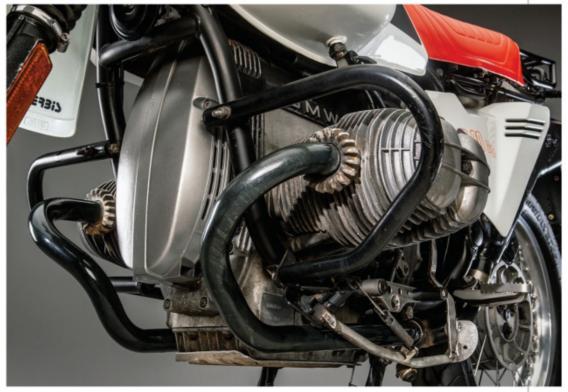
Front and rear fenders are plastic, as are the side panels. Instrumentation, consisting of speedometer and warning lights for signals, oil pressure, neutral, charging and high beam and the keyed ignition switch, was unique to the model, and was simply housed in a plastic pod atop the headlight. Also unique to the dualpurpose BMW was the orange-colored saddle. On the first R80G/Ss, the white gas tank held 5.1 gallons of fuel, and it used just one petcock mounted on the left side - down turned the gas on, sideways shut it off, and up provided reserve.

#### On the road (and off it)

BMW showed the new R80G/S to motorcycle jour-

nalists late in 1980 in Southern France in Avingnon. There, the motoring press got to experience the machine that would be marketed as a 1981 model over a winding and twisting route that included asphalt and dirt in the hills of Le Baux.

"The G/S is a street bike that — incidentally — you can take down a fireroad for a pleasure cruise," wrote the editors of Cycle magazine in a December 1980 test. "On our scale, the R80G/S posts about an eight in street performance and about a two in the dirt. It's not primarily a dirt bike — so it doesn't need to tip the scales at less than 300 pounds. Only secondarily a trail



At 437 pounds (with a half tank of fuel) the R80G/S wasn't particularly light, but the engine made a sufficient 50 horsepower.





bike, the G/S can nip anyone accustomed to busting berms. If you try to power slide the G/S, you're likely to bang your shin on one of the cylinder heads when you throw a leg out.

"If you take the 800 over a fair-sized jump, you'll bottom its suspension ferociously. If you wheelie it, you'll immediately note that it's a gargantuan machine — both in size and weight — compared to any other bike you'd ride in the dirt."

But that didn't stop BMW from entering three machines in the 1981 Paris-Dakar competition, all of them specially prepped by Bavarian tuning outfit HPN Motorradtechnik. The bikes had a stronger chassis and larger gas tanks to increase range. Aboard such a race machine, rider Hubert Auriol won the 1981 Paris-Dakar, and he did it again in 1983. In 1984, motocross champion Gaston Rahier became a part of the team. He beat Auriol and took first place in the event.

In its second year of regular production, 1982, author Falloon notes there were minimal updates to the R80G/S, with the exception of a wider rear wheel rim, standard electric-start and a different available color scheme in blue with black saddle. In recognition of the Paris-Dakar victories, BMW launched the 1984 R80G/S Paris-Dakar model. Details remained much the same as standard, but the most noticeable difference was the 8.3-gallon gas tank that bore a decal with Gaston Rahier's signature.

For 1985, BMW updated the R80G/S with improvements to the engine that had been made to the company's R80-series — improvements that helped make the powerplant lighter

and quieter — and featured a new final drive assembly.

By 1987, the R80G/S was in its last year of the first generation — to be followed in 1988 by an improved model that featured BMW's new Paralever rear suspension that included a second U-joint to the drive shaft and a stabilizing strut that runs from the bottom of the transmission to the rear final drive. The machine lost the slash in the G/S designation and became simply the R80GS.

BMW also introduced a larger sibling in 1988 with the R100GS, complete with a larger 980cc boxer engine that made 60 horsepower. The R100GS was given the new Paralever rear suspension and featured 40mm Marzocchi forks. This model stole some of the limelight from the R80GS, and the last of the line for the 800cc adventure machine arrived in 1996.

The R80G/S had been the answer to BMW's slow sales, and any idea of closing the Motorrad factory was well behind the manufacturer. BMW went on to introduce the R1100GS in 1994 and then the R1150GS in 1998. These machines were followed by the popular R1200GS in 2004 and the R1200GS Adventure of 2006.

BMW also offered a line of 650cc single-cylinder GS models, first introduced in 1993. Those machines remained in the lineup until 2008, when BMW began selling its F800GS and F650GS — both powered by parallel-twin engines. Production of those twin-cylinder motorcycles continues with the F850GS and F750GS. These use the same 853cc engine but the 750 is tuned differently to lower final output.

#### "I didn't want it to be in number 10 condition."

#### Jim's R80G/S

With all of that research behind him, Jim set out determined to locate an as-original-as-possible first-generation R80G/S to add to his motorcycle collection that is on display at the Throttlestop museum in Elkhart Lake, Wisconsin.

He found a 1987 R80G/S Paris-Dakar model for sale at Godin Sporting Cars & Motorcycles Ltd. in the U.K. According to Godin, records show the motorcycle was built in August 1986 as a 1987 model. It was registered as a 1988, but it clearly lacks the advanced Paralever suspension of that version of the machine.

"I didn't want it to be in number 10 condition," Jim says of

some of the nicks and scars on the bike that shows just over 93,704 kilometers (58,224 miles) on its odometer.

"But I didn't want it if it was a 5, either. This one was represented as a solid 7.5, and when I got it here in December 2017, it really was what I'd expected to see.

"It's original, hasn't been restored, and it cleaned up nicely. We didn't touch it up or do anything else to it. It's been pickled for display here at our motorcycle museum."

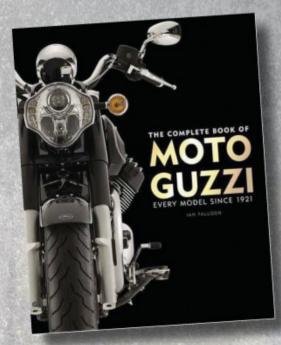
Jim says he's happy to have the BMW R80G/S Paris-Dakar in the display, as it is an important model in the evolution of the adventure touring motorcycle — a market that was given a tremendous boost when Charley and Ewan took their first ride around the globe. **MC** 





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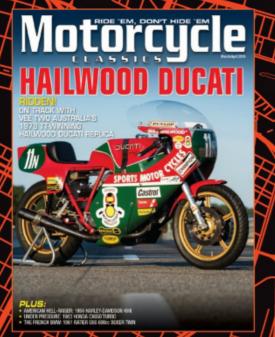
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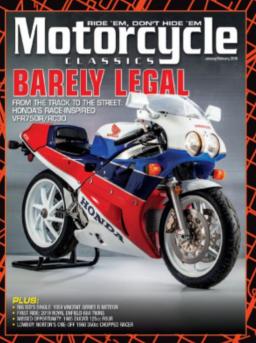
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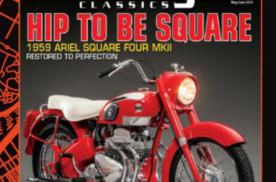
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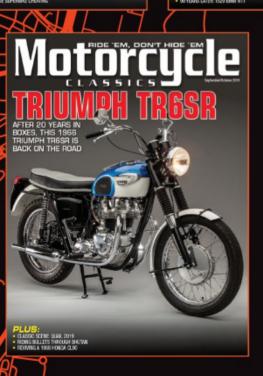








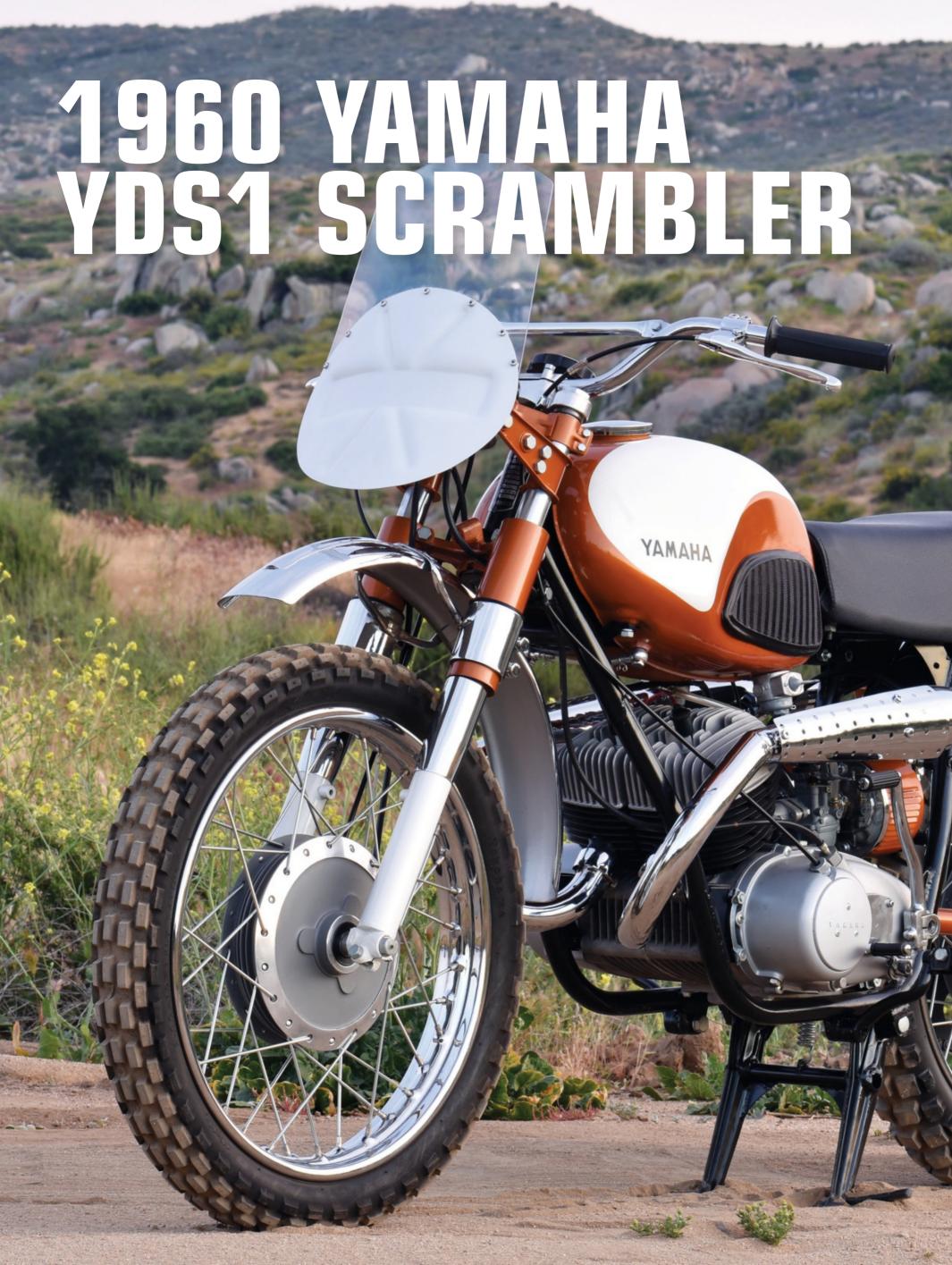
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## Yamaha's first production racer for the masses?

Story and photos by Dain Gingerelli

Today the name Yamaha is synonymous with racing.

Yamaha Motor Corporation was originally created in 1955 as a repurposed company from long-standing Nippon Gakki, a conglomerate with roots dating back to 1889 when Torakusu Yamaha formed the musical company Yamaha Organ Manufacturing; thus the famous tuning fork logo. The new motor company's mission was to develop and manufacture motorcycles.

Fittingly, Yamaha's race history begins with the very first Yamaha, the YA1, launched in May 1955 and powered by a nondescript 125cc 2-stroke engine based on DKW's RT 125 piston-port single. Two months after releasing the YA1 to dealers, Yamaha's factory race team, itself still in the embryonic stage, entered a small squadron of the 125cc roadster for Japan's most prestigious domestic race at the time, the Mt. Fuji Ascent Race. This marked the third year for the event that featured a one-way 24.2-kilometer (15.1 miles) course snaking its way partially up Mt. Fuji before reaching an altitude of 1,400 meters (4,600 feet) at the finish line. Racers were timed on the course to determine the winner; Japan's fledging motorcycle industry paid close attention to who won — and who didn't win.

Subsequently, Yamaha entries dominated the commercial bike division at Mt. Fuji in 1955, not only winning but crowding seven bikes among the top 10 finishers. Later that year a small armada of YA1 team bikes swept the top four spots at the inaugural closed-course Asama Highlands Race. Success breeds success and YA1 sales, having reached nearly 2,300 units for 1955, quadrupled the following year and nearly doubled again for 1957.

Yamaha has been racing its products ever since, especially in America, so perhaps now would be a proper time for us to pull into the pits to pause and pose the question: What is the most significant Yamaha production racer to ever take a checkered flag on America's stage? A knee-jerk reaction by many U.S. race fans is to shine the light on the treacherous and oh-so-fast TZ750, a model that dominated road racing in America dur-

ing the mid-to-late 1970s. The powerful TZ750 also helped launch perhaps the most enviable road racing career of any American — that of "King" Kenny Roberts. Not to be overlooked, too, is Yamaha's early 250cc- and 350cc-based production road racers prior to the TZ750; just ask guys like Jody Nicholas, Ron Pierce, Don Emde, Gary Fisher and countless others who laid waste to the competition during their stellar road racing careers aboard Yamaha TD- and TR-based twins.

Or we might consider this bike, the 1960 YDS1 Scrambler. Even though it never won a notable championship — or even a major race — on these shores, the Scrambler qualifies as one of Yamaha's first — if not the first — production racer available through Yamaha dealerships in America, taking its rightful place alongside another proddie racer of the time, a bike marketed as the Racer (a model that eventually assumed the name Ascot Scrambler, in reference to that legendary clay-packed oval race track where it dominated the Novice class during the early 1960s). Together these two Yamahas formed the vanguard for a legacy unmatched in U.S. competition today.

#### 26 miles across the sea

The story of the YDS1 Scrambler actually kicks into high gear where, on the small resort island of Santa Catalina located 26 miles off California's scenic coastline, it first raced in America. A little background about Santa Catalina: William Wrigley Jr., of chewing gum fame and who also possessed controlling interest in Major League Baseball's hapless Chicago Cubs, also had been a major landholder of the island, and was responsible for much of the development that transformed Catalina into a resort destination. By 1952 Catalina's commerce leaders, in hopes of persuading even more tourists to visit their bucolic isle, decided to promote a motorcycle race that looped through the town of Avalon before snaking into the surrounding hillsides. And thus was born the Catalina Grand Prix, a mainstay of racing on the West Coast until its final running in 1958 when, according to reports, a rogue group of rowdy bikers mugged one of the leading townsfolk, prompting the cancellation of future racing for good. The final GP also happened to be Yamaha's first — and, of course, only — attempt



Some new parts had to be made from scratch, like the metal brackets holding the number plate.

at racing there. The factory entered five race-prepped versions of Yamaha's new YD1, a 250cc twin that served as the company's flagship model.

Long story short, the YD1 originally joined the YA1 and YC1 (a 175cc model; a YB1 model also existed, but it was simply a slightly sportier variation of the YA1) in the lineup in April 1957. The YD1 was powered by the Tuning Fork company's first 250cc twin-cylinder 2-stroke engine, and first order of business was to enter modified YD1s in a race, the 1957 Mount Asama Volcano Race (formerly the Asama Highlands Race, which was run in alternate years). Variations of the YD1 — two versions, reportedly designated as YD-A (its engine having a 54mm x 54mm bore and stroke) and YD-B (56mm



#### 1960 YAMAHA YDS1 SCRAMBLER

Engine: 246cc air-cooled OHV 2-stroke parallel twin, 56mm x 50mm bore and stroke, 8:1 compression ratio, 20hp @ 7,500rpm (claimed)

Top speed: NA

Carburetion: Two 20mm Mikuni VM 20 Transmission: 5-speed, chain final drive Electrics: 12v, flywheel magneto ignition Frame/wheelbase: Dual downtube steel cradle/50.7in (1,288mm)

Suspension: Telescopic fork front, dual shocks w/

adjustable preload rear

**Brakes:** 7in SLS drums front and rear **Tires:** 3 x 19in front, 3.25 x 18in rear **Weight (dry):** 291lb (132kg) **Seat height:** 30.75in (781mm)

Fuel capacity/MPG: 4.09gal (15.5ltr)/71mpg Price then: \$649 west coast; \$659 east coast (1960)

x 50mm) — swept the first three places. Emboldened by these results, YMC executives set their sights across the horizon to America's prized West Coast race, the Catalina GP. In preparation for the race Yamaha created what eventually became the YDS1, the S signifying that this was a



Owner Pat Knopp and his restored 1960 YDS1 Scrambler.

sporty version of the existing model YD1. The five Catalina-bound scramblers reportedly were prototypes based on the YD-B entries at the 1957 Asama race, each using a cassette gearbox that allowed mechanics to change gear ratios quickly. Four were ridden by seasoned American racers, the fifth by an upstart 19-year-old Japanese racer named Fumio Ito. Of the 32 starters in the 250cc division only 11 bikes finished, confirming how grueling the race was. None of the four

American riders fared as well as Ito, who





placed sixth, one position behind a fellow named Dave Ekins riding an NSU.

### Stay West, young man, stay West

Yamaha later entrusted San Diego motorcycle dealer Sonny Angel with one of the Catalina bikes for a young man named Calvin Rayborn to race at local half-mile tracks. Wrote author Colin MacKellar in his book Yamaha, "The wins he achieved on the bike were an indication of great things to come." Truly an understatement about the fledging brand from Japan as well as Rayborn himself.

No doubt, the YD1, and later YDS1, model represented a major leap for

Yamaha in the way the fledging company developed its products. Buoyed by the YA1's early success, YMC's president, Genichi Kawakami, gave the go-ahead in 1956 for a new and modern research facility to be built in Hamamatsu, Japan. When completed he instructed engineers to develop a 250cc twin, basing their design on an existing West German brand's 250. According to sources today, the group of six young engineers covertly produced their own blueprints of an allnew 250 twin instead. The result was the YD1, which was released to Japan's domestic market April 1957. The initial run of bikes developed some mechanical issues that Yamaha quickly addressed,

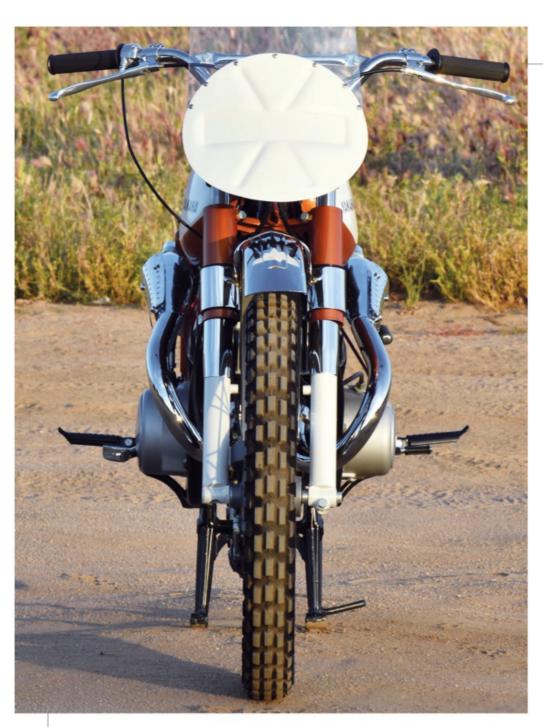
and by autumn of 1957 Yamaha had prepped a handful of racer versions (YD-A and YD-B) for the Asama race. Result: YD-Bs swept the first three positions in the 250cc class, while the YA1 once again dominated the 125cc class.

The YD-B racer prompted Yamaha to develop a sport version for consumers, initially called the 250 S, which had a modified YD1 engine with two carburetors as opposed to the engine's original single-carb configuration, for more speed. After the 250 S's initial production run in mid-1959 Yamaha changed the model name to YDS1. The groundwork had been laid for the YDS1 Scrambler that joined the product line for 1960.





The engine was fully rebuilt during the restoration. When new, the 246cc parallel twin made 20 horsepower at 7,500rpm.





#### The same, only different

While archival Catalina GP photos of Yamaha's 1958 team bikes reveal rather crude-looking entries, the production-based 1960 Scrambler presented itself as a complete and ready-to-race bike, right down to its front number plate, upswept expansion chamber exhausts and knobby tires. Clearly, Yamaha had done its homework for its U.S. racer venture.

The new production racer's overall fit and finish was first-rate, too. Prior to developing the new 250 YMC had sent personnel to scout the U.S. market, and their findings told them that bright colors with pearlescent or metallic overtones coupled with lots of chrome were the order of the day. The new YDS1 Scrambler showed up with those components, and in spades. Both fenders were chrome plated, as were the exhaust pipes, handlebar and wheel rims (a 19-inch up front for the U.S. model; the domestic-market Scrambler rode on an 18-inch).

The metallic-pearl paint found its way onto the bike as well, the YDS1's striking two-tone gas tank and accompanying body trim remarkably stylish for the time. Even the stretched solo seat was fashioned specifically for this model, and

the Yokohama knobby-tread tires meant that the 250 Scrambler was race-ready for the customer; just paint on your chosen racing number and go!

In truth, the Scrambler was a production-based bike offered in limited numbers (alongside the Racer intended for Class C oval-track and TT racing in America). Moreover, both production racers were based on the street-legal YDS1, a model that was targeted specifically at the U.S. market. And while the two racing variations might have sparked customers' interest in Yamaha Motor Company, the YDS1 itself had all the attributes that marketing researchers had determined the American motorcyclists sought in a front-line model. Sales took off and Yamaha was on its way to becoming a key player in the U.S. motorcycle market.

The race-ready production racer's air-cooled quarter-liter engine boasted a bore and stroke of 56mm x 50mm, fed by a pair of Mikuni VM20 carburetors. A rather high compression ratio for the time — 8:0 — and expansion chambers to help monitor intake and exhaust flow, contributed to a claimed maximum 20 horsepower at 7,500rpm. A wet, multiplate clutch and 5-speed constant-mesh

transmission completed the drivetrain to the bike's chain drive.

Period literature shows the race-only Scrambler was lighter than the street-going YDS1, with a claimed dry weight of 291 pounds compared to the road-ster's 304 pounds. The Racer variation was lighter yet, checking in at a claimed 278 pounds. While the YDS1's ignition system was battery-operated, both race bikes relied on flywheel-magneto ignitions for spark.

Clearly, the new YDS1 Scrambler had all the right stuff, as reported in the June 1960 issue of Motorcyclist: "NEW Grand Prix series of Yamaha models includes this Grand Prix Scrambler, a 250cc 2-stroke twin with a 5-speed gearbox, magneto ignition, double loop frame, upswept pipes, combination tachometer and speedometer, engine skid plate, chrome sports fenders, etc. Finished in Metallic Gold and White. Model was designed after their 1958 Catalina entry."

#### Unscrambling this scrambler

Pat Knopp, a former racer and current Trailblazers member and trail-bike enthusiast who happens to earn his daily bread as a finish carpenter, encountered just such a bike advertised on eBay. A friend,



who opted not to bid on what appeared to be a rusted-out 1960s-vintage Catalina Scrambler, told him about it. Pat gave the bike a look, and the more he examined it, the more he realized there was something special here. Precisely how special, he didn't know at the time, but after "a ton of research," he made top bid on it.

"After I bought it I didn't take it apart until about a year and a half later," Pat recalls. Translation: Over time it would be easy to have parts scattered in separate boxes throughout the garage until the whole project got away from him. Eventually, though, he began his parts quest, first locating the rare front fender from a collector in England who had been holding it in hopes of using the surviving fender for a similar rare model, Yamaha's Liberty Ranch that had been earmarked for British and Australian sheep ranchers as a field workhorse.

Restoration was more than just a matter of hunting down old parts, though. Some of the Scrambler's resurgence depended on Pat actually making completely new replacement parts, in some cases relying on new technology such as 3D printing to recreate them.

Pat knew nothing about 3D printing, so he attended a local college class to learn the actual technique. Next he shopped and bought the necessary 3D equipment before attending a trade show where he learned about rubber compounds to actually make items such as the gas tank's knee grips, hand grips, and shifter and kickstarter rubber trim.

"Determining the rubber compound was a little challenging," Pat admits, "but with the help of experts at the [dealer] show, I think I hit it pretty good."

He also fabricated incidental parts. For instance, he made a die to stamp out the aluminum number plate, then had fellow Trailblazer Lee Fabry stamp it out on a 6-ton press. Next Pat built the number plate metal brackets from scratch. "I scaled them off parts I saw in manuals and photos," he said about their proportions.

Pat leaned on some other Trailblazer contacts (Trailblazers is an affiliate of the Motorcycle Industry Council that recognizes pioneers and other figureheads of motorcycling's past) for assistance, too. For instance, a long-established plating shop, EC Grinding in Santa Fe Springs, California, helped with the hard-chrome for the refurbished fork legs that the late Jim McMurren (also a member of the Trailblazers' Hall of Fame and who actual-

ly raced a Scrambler back in the day) confirmed to be the right size. McMurren also helped Pat dial in the magneto's timing. A local auto body repair shop assisted with reclaiming the battered rear fender, and Pat upholstered the seat himself. He also applied the striking paint colors that, to the best of his knowledge, are what the original bike wore.

The engine enjoyed a complete rebuild too. But Pat is reluctant to fire it up: "I'd hate to discolor the exhaust pipes," he said, almost apolitically. Pity, because it'd sure be a treat to hear the crazy cackle from those stubby expansion chambers, no?

When all was said and done, Pat displayed the bike at the Tom Cates Memorial Bike Show that precedes every Trailblazers banquet. The 2019 show also happened to be the organization's 75th anniversary gathering, so it was a rather landmark show as well. And, by show's end, the reclaimed Scrambler wore the Best of Show ribbon, top prize. Not a bad legacy, perhaps surpassed only by the fact that this little Yammie represents the beginning of Yamaha Motor Corporation's long run of providing American racers with some of the best racing equipment available to them. Ever. MC



Best Honda Four went to Jim Culora and his 1979 Honda CB750F Super Sport, peppered with a slew of "tasty '80s mods."

# BARBER 2019

## The 15th Annual Vintage Festival

#### Story and photos by Landon Hall

he Barber Vintage Festival seems to get bigger and better every year. This year's event, which ran Oct. 4-6, was maybe the hottest temps we've ever faced, but we're told ticket sales were up some 15 percent over the prior year. Event Grand Marshal John Penton was the guest of honor at Friday night's Motorcycles by Moonlight museum fundraiser, but before that, he kindly swung by the Motorcycle Classics tent to sign autographs and chat with readers. Also joining us was John's son Jack Penton. Jack is an accomplished offroad racer, and also a member of the AMA Motorcycle Hall of Fame. Gentlemen, thanks for joining us!

Our featured class this year was Honda Fours, celebrating the 50th anniversary of the debut of the 1969 Honda CB750 Four. Two Fours in the show got our attention. The first was Jim Culora's CB750F Super Sport, a two-owner bike which he has lovingly modified over the years with a host of race-spec parts, like 16-inch front and 18-inch rear mag wheels (see photo at top). The second was Barry Schonberger's Honda CB750, which combines bits from 1972 and 1974 machines, and was originally built in 1979 with an ATP Turbo kit. Many thanks to the Barber Museum's Brian Slark and MC author and friend Corey Levenson who helped us with the judging.

Best in Show went to Keith Martin of Big D Cycle, Dallas, Texas, and his 1938 Triumph Speed Twin (facing page). Martin restored the bike, then took it on the Cross Country Chase, a rally from Sault Ste. Marie, Michigan, to Key West, Florida, over the course of eight days, this past fall. Too cool.

Dates are already set for the 16th Annual Vintage Festival, Oct. 9-11, 2020. Be there! MC













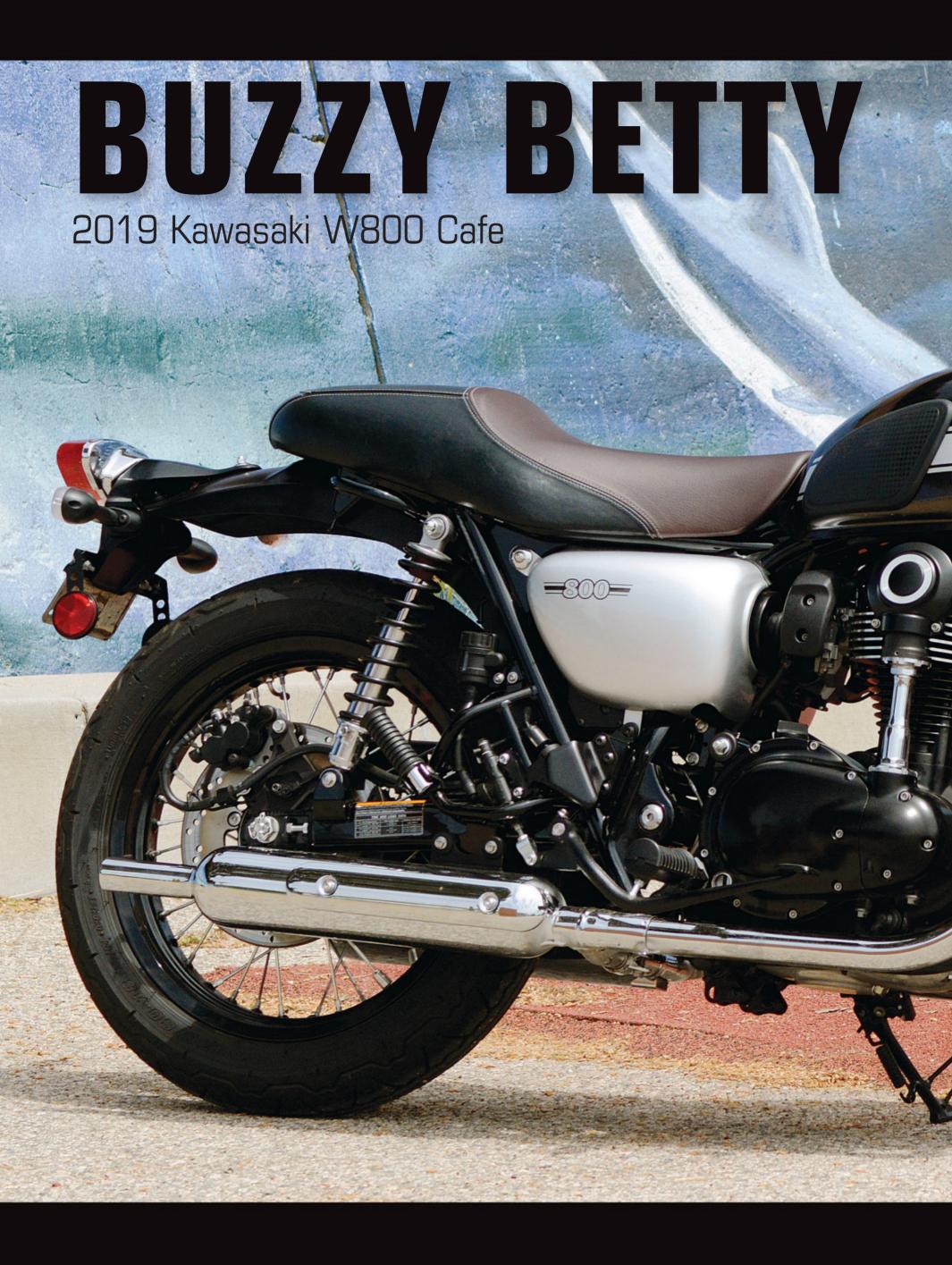








Left to right from top: Rick Schaeffer won our award for Best Japanese Rider with his 1977 Honda Gold Wing, which is original and wellloved, showing some 30,000 miles, yet it looks brand-new; Best European Rider went to David Miller and his 1970 Moto Guzzi Ambassador, which had just been resurrected and put back on the road after a 32-year rest; Best British Rider went to David Schaefer and his all original 1964 Triumph Tiger; Best British Restored went to Mark Sawicki and his 1920 Clyno Lightweight; Best Japanese Restored went to Joe Templeton for his 1971 Bridgestone TMX 100; Best Custom went to Chris Klamer, who built this wild 1981 Honda CB750; Jack Penton (left), John Penton (middle) and a lucky reader getting a Penton jersey signed by the man himself; Best Restored European went to Parker Lilly and his 1974 Ducati 750 GT; though it didn't win an award, we were wowed by this neat period Honda CB750K, with — you guessed it — a turbo. Thanks to owner Barry Schonberger for bringing it out!; Keith Martin and his 1938 Triumph Speed Twin won Best in Show.







Before we dive into the Abyss of Reason, let's look at the challenges of rekindling Kawi's quinquagenarian into new form. For starters, in the mid-1960s the W1 (single carb) and hotter W2 (dual carb) 650cc twins were spinoffs of BSA's 650cc A10 pushrod twin, which was a formidable enough bike in its day. Kawasaki was on the move at the time, attempting to leap up-market from its origin — like most if not all postwar Japanese bike-makers — as a practical "transportation" company. The 250cc A1 and 350cc A7 two-stroke twins launched around the same time, and with rotary valves and

Grand Prix-proven engineering, they were blisteringly fast giant killers — exactly the kind of bikes that could and would smoke (sic) BSAs and Triumphs on the street and track.

So the W1 and W2 were then, and remain today, odd footnotes in Kawasaki's trajectory toward superbike stardom. If you can find one, it won't be worth what a good Mach III 500cc two-stroke triple, Mach IV 750cc 2-stroke triple or Z1 DOHC 903cc inline four will command.

Engine: 773cc air-cooled SOHC parallel twin, 77.0mm x 83.0mm bore and stroke, 8.4:1 compression ratio, 46.4lb/ft torque @ 4,800rpm, 46.2hp @ 6,200rpm Fueling: Multiport sequential electronic fuel injection Transmission: 5-speed, chain final drive Electrics: 12v, electronic ignition

Frame/wheelbase: Dual downtube steel cradle frame w/ steel swingarm/57.7in (1,466mm)

Suspension: Telescopic fork front, twin shock absorbers

with adjustable preload rear

Brakes: Single 12.6in (320mm) disc front, single 10.6in

(270mm) disc rear, ABS Tires: 100/90 x 18 front, 130/80 x 18in rear

Weight (curb): 489.5lb (222kg) Seat height: 31.1in (790mm)

Fuel capacity/MPG: 4.0gal (15.1ltr)/42mpg (observed)

Price: \$9,799

# Premodern retro

Now we can fast forward to 2019, and the 773cc W800 Cafe. With Kawasaki's "modern retro performance segment" (our label here — call it whatever you want) covered ferociously by the Z900RS Cafe, and modern 2-stroke remakes of the Mach III and Mach IV unfeasible due to emissions regulations, Kawasaki evidently chose to bring back the W1/W2 in café racer guise. This is a bit like bringing up an aging bush league ballplayer to the majors just because he has name recognition, and hoping no one remembers he

was never that good anyway.

It's hard to imagine a company going to such an effort to create a totally bespoke bike and miss by such a margin. Remember the British mathematician Alan Turing, whose team cracked the German Enigma codes during World War II? The term "enigma" perfectly defines the W800 Cafe. Only instead of providing answers, this two-wheeled enigma begs a question: Why?





# Esoteric engine

The engine design is delightful, with excellent detailing, precise castings and finishes, and an elegant shaft-driven overhead camshaft mirroring Norton's CS1, International and Manx racers, and most all Ducatis of the mid-1950s through early 1980s. (BTW it's worth knowing for when you're kicking tires with the car guys, that the Porsche Carreras including the infamous James Dean 550 — also used bevel gear-driven overhead camshafts. As did Mike Hailwood in his historic 1978 Isle of Man victory aboard the Ducati 900

NCR.) And so, essentially the W800 Cafe engine belongs to an exotic club.

Here's how the system works. Different from everything else in the motorcycle and automotive market, instead of the typical chain or belt drive for the overhead cam, the camshaft turns

via a vertical "tower shaft" located in a tube on the right side of the engine. Crankshaft motion transfers 90-degrees through helical-bevel gears to this shaft and up to the head, where another set of 90 degree helical-bevel gears turns the camshaft. Advantages for the design decades ago included elimination of pushrods and reciprocating mass, precise valve timing, and no chance of breaking a chain. Contemporary engineering, materials and manufacturing eliminate such potential woes in other engines today, but the cool factor of a bevel-drive engine remains.

Advancements to current motorcycle specs including EFI, a clutch-assist feature for newbie riders, and a slipper clutch, which smoothens downshifts for the ham-handed. Naturally, the W800 Cafe is electric start, a welcome change to, for instance, Yamaha's annoyingly regressive SR400 kickstarter.

# **Buzzy Betty**

"Buzzy Betty" sounds like the name of a B-25 Mitchell bomber, but it defines the W800 Cafe motor nicely too. In contrast to the 900cc Triumph Street Twin, a 16-percent larger, sweet-running parallel twin, the W800 acts more akin to a V-1 buzz bomb. In the "Plus" column, the engine note is crisp and alluring, with an impressive minimum of mechanical noise. Unfortunately, though, high-frequency vibration permeates the motorcycle, with the grips, tank and footrests all alighting as the revs build. The only respite

> we found was between 4,500 and 5,500rpm. To warp some Dierks Bentley lyrics, "I know what they were feelin'/But what were they thinkin'?"

Finding comfort at legal highway speeds means using fourth rather than fifth gear, which helps keep the engine in

the sweet spot. Creative W800 Cafe owners will find some of this can be masked, such as with vibration-quelling grips (Pro Grip 714 Rally Dual Sport MX grips worked wonders on a vintage enduro, I found) and inexpensive bar-end weights (cheap used on eBay), but it would be better for Kawasaki to sort out the engine balance and/or mounting system. Remember, Norton developed its famous Isolastic engine mounts a half century ago for the same reason.

Overall, performance is friendly for street use and adequate for jaunting along wiggly two-lanes, thanks to peak torque delivery at 4,800rpm, but it's hardly stirring by sportbike standards. The W800 returned a 42mpg average during our time with it, while exclusive freeway use netted a better 48mpg.

"Overall, performance is friendly

for street use and adequate for

jaunting along wiggly two-lanes ..."



The bevel-gear camshaft drive on the right side of the engine is a striking visual feature (left).

# Lovely Rita

Keeping the English thematics flowing here, owing to the W800 Cafe's design roots borrowed from the Mods and Rockers era, the above subtitle Lovely Rita was of course a Beatles song about a meter maid.

Hardly a glam topic, but in truth the W800 Cafe is just that — lovely in design.

It has a minimalist café fairing, the aforementioned Clubman handlebar, a two-tone bum-stop saddle, avantgarde black spoke wheels, the chromed peashooters, and surprisingly, an upscale LED headlight — a rarity in this class of machine — to advance day and night safety.

The finishes are particularly nice, including the satin-black engine cases, glittery paintwork, and seemingly flawless chrome plating on the header pipes,

mufflers, camshaft shaft tower, shock bodies and fuel cap. The gloss-black rims — a throwback from the bygone Brough Superior era and signature of the current café/bobber era — look great and are an unexpected touch.





The 773cc air-cooled parallel twin puts out 46.2 horsepower at 6,200rpm at the rear wheel.

### Basic chassis

Befitting its role as a retro machine, the W800 breaks no new ground in the chassis department. Twin shocks, a conventional fork, and single front and rear disc brakes with ABS about cover it. Suspension travel is modest

with 5.1 inches in front and 4.2 inches out back. Only the shocks are adjustable, and then only for spring preload. Cue 1969!

The marriage to the '60s-'70s era continues with the W800 Cafe's 18-inch wheels and tires. Once a common size, they're

rare today because most every sport bike worth its lean-angle uses 17-inch rubber. And that brings up another negative for the Kawasaki. The 100/90 front and 130/80 rear tires feature a vintage pattern (reminiscent of Michelin's bygone PZ2) and profile with two negatives: an

unnerving tip-in feeling when initiating corners, and a disquieting weave on grooved freeways. As Commander Cody sang in Hot Rod Lincoln: "The brakes are good, tires fair." Were a W800 Cafe to take up residency in my garage, I'd bin the OE rubber and fit a pair of Avon Roadrunners pronto.





The small bikini fairing reminds of the BMW R90S (left). The vintage-pattern tires leave a lot to be desired.

# "In its own roundabout way, then, Kawasaki's W800 Cafe really does encapsulate the retro spirit."

As great as the W800 Cafe looks — and we do fancy it — there are troubles even here. The vintage-style 4-gallon fuel tank has a graceful organic shape but, woefully, is too wide and splays the rider's knees outward unnaturally. And too, the low and rakish Clubman bar — its iconic design borrowed from the BSA Lightning Clubman of the mid-1960s — requires scooting forward on the stepped dual saddle to find something approximating a comfortable position.

Happily, the front of the seat is long, wide and flat enough to allow the rider to move around to find a satisfactory position — unlike deeply pocketed solo saddles on bikes such as the Ducati Monster — and is also deep enough to provide reasonable comfort ... despite the engine vibration. And the clutch and brake levers are adjustable for reach — a highly useful feature more bikes should have.

## One hot mess

So as you can see, in our opinion Kawasaki's W800 Cafe is a pretty — and also pretty messed up — retro ride in stock form. In unvarnished truth, it represents an attractive proposition for a Japanese modern classic that can benefit from (and

sincerely needs) immediate and modest fixes including tires, grips and bar-end weights, and a flatter handlebar shaped to nest behind the BMW R90S-style bikini fairing.

As a next stage, for experienced and confident bike builders, narrow the fuel tank, rubber-mount the footrests, handlebar and maybe even the engine cases, and fine-tune both the suspension and brakes. Or our bold suggestion: a high-pipe scrambler, replete with a narrowed tank, skid plate, longer-travel adjustable suspension, no fairing, a cross-braced handlebar, universal tires, a flatter vintage Bates-style desert sled seat — and of course, much attention paid to creature comforts.

But do not despair: Such dreams are why bike owners and riders — and not manufacturers at all — started the café racer and scrambler movements in the first place: to improve stock bikes for sporting riders. Thus, with Kawasaki's re-entering the classic category with the 2019 W800 Cafe, it's somehow fitting that this new machine would beg for the same attention all over again. In its own roundabout way, then, Kawasaki's W800 Cafe really does encapsulate the retro spirit.

Now go forth, and live it. MC



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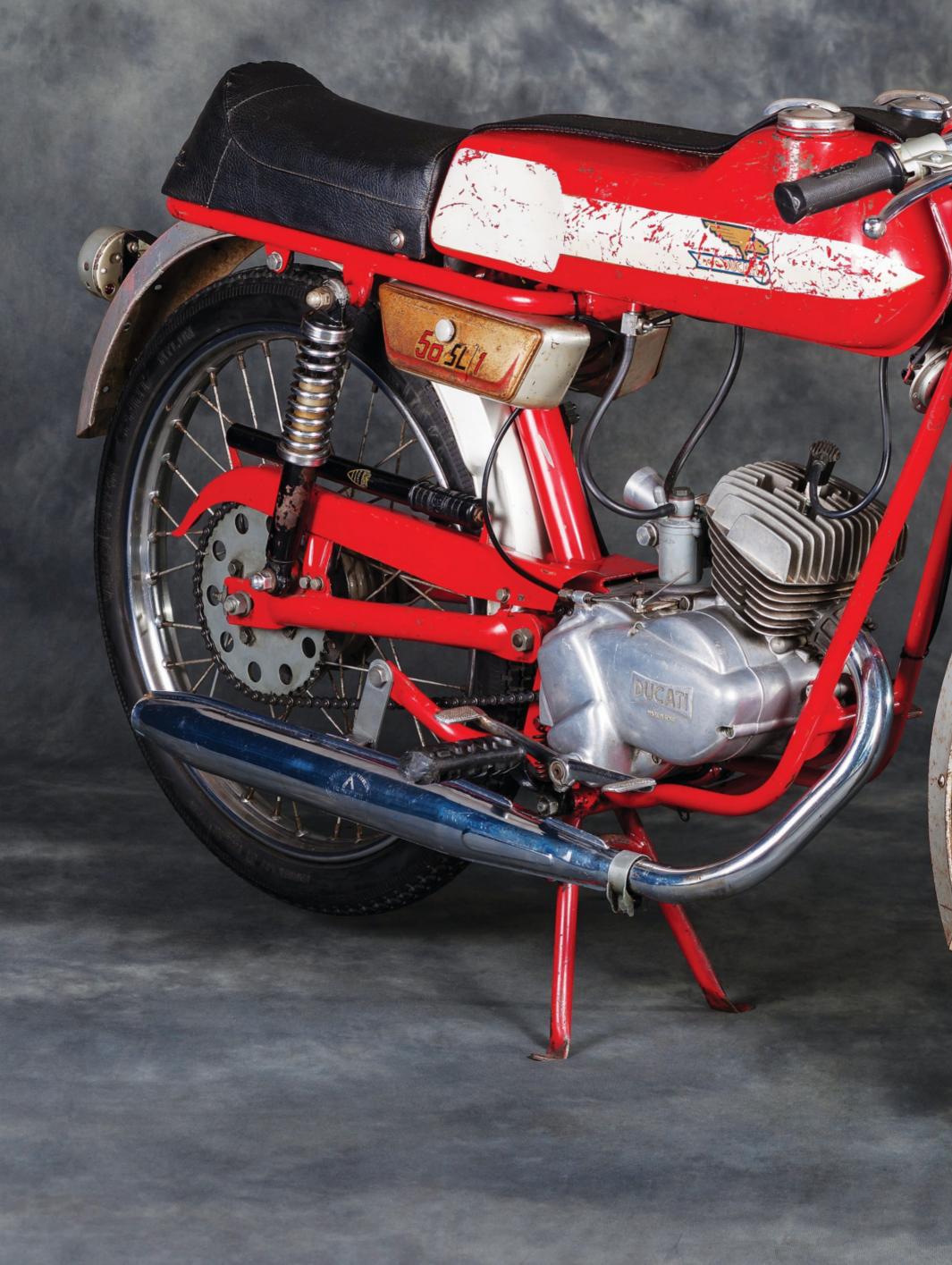
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But a year before Ducati's desmo singles arrived, the SL/1 had serious road presence. That long, sculptured, silver-and-red gas tank screamed racetrack technology, and so did the solo seat and racing handlebars.

These details underlined the fact the tiny engine had been significantly boosted in power to achieve a top speed of over 60mph.

# The stuff of dreams

A teenage dream machine, the 50 SL/1 was a long way from Ducati's original mopeds, which were designed to be practical and affordable, and to attract younger riders to boost Italian domestic sales. Because it was never exported officially outside Europe, the 50 SL/1 remains a very rare motorcycle in the U.S.

This example is owned by Peter Calles, whom we featured in a recent issue (see Full House, Motorcycle Classics, July/August 2019). It is a perfect bookend to his collection of Ducatis that spans several decades and cubic capacities.

The fact that it is in completely original and unrestored



1967 DUCATI 50 SL/1

Engine: 49.66cc air-cooled 2-stroke single, 38.8mm x 42mm bore and stroke, 11:1 compression ratio, 6hp @ 6,500rpm

Top speed: 60mph-plus

Carburetion: Single, remote-float, 18mm Dell'Orto

Transmission: 4-speed, chain final drive

**Electrics:** Magneto ignition

Frame/wheelbase: Dual downtube steel cradle

frame/45.3in (1,150mm)

Suspension: Telescopic fork front, dual shocks rear Brakes: 4.65in (118mm) SLS drums front and rear

Tires: 2.25 x 19in front and rear Weight (dry): 130lb (59kg) Seat height: 28.7in (730mm)

condition makes it a genuine time capsule.

# Not the only pocket rocket

Ducati's 50 SL/1 may have been a leader in ultra-lightweight café racers but it had many challengers (see sidebar). These micro-motorcycles were relatively cheap to manufacture. Companies that didn't have suitable engines simply bought one in from another manufacturer, such as from Minarelli and Morini in Italy, or Zündapp in Germany.

The market segment was fueled by the first generation born after the end of World War II. Young students and city workers commuting to their first jobs were looking for affordable options, so these 50cc motorcycles and mopeds had to be cheap to buy and run: 2-stroke engines fit the bill perfectly and the price in most cases was half that of the smallest

2-stroke model available.

Safety laws introduced in Italy in 1959 limited mopeds to 40kmh (roughly 25mph), so typical engine outputs were limited to around 1.6 horsepower. This took the pressure off manufacturers to develop ever more powerful models. In





theory they could keep churning out the same model year after year with cosmetic upgrades.

However in typical Italian motorcycle engineering tradition, it wasn't long before performance specialists had managed to unshackle stifled performance. The race was on for the hottest pocket rocket of the Sixties.

# Hunting for a new market

Ducati began with several 48cc models launched in 1961 with 48cc engines. Among the range were names like Cadet and Cacciatore (a dual-sport model with its title translated as "hunter").

A year later the Piuma Sport brought a hint of performance to Ducati's sub-50cc range. It featured more motorcycle-like styling and a more powerful engine. Although shackled in



The 49.66cc 2-stroke single puts out 6 horsepower at 6,500rpm, fed by a single, remote-float 18mm Dell'Orto.



Amazingly, even the Ducati-logoed tire pump is still present on this 50 S/L1, mounted on the swingarm.



Though the paint shows the scars of time and use, this bike will remain unrestored.



# 1965 Giulietta Super Sport

Giulietta was a division of the Peripoli motorcycle company, which started making motorcycles in the late 1950s. By 1965 it was the seventh largest manufacturer in Italy and production continued into the 1980s. This unrestored 1965 Super Sport 50cc was last registered (in Italy) in 1974.



# 1966 Garelli Monza Junior

Twenty-two-year-old Adalberto Garelli founded his factory in 1919 with the first Garelli motorcycle using his own 350cc 2-stroke engine. It set a long-distance record from Milan to Naples, proving 2-strokes were durable. This is an unrestored, 5hp, 1966 50cc Monza Junior.



# Early-1960s Atala Golden Arrow

Atala produced a range of 2-strokes from 49cc up to 125cc, usually powered by Minarelli engines. This early-1960s Freccia D'oro (Golden Arrow) uses a 49cc type P-3 Minarelli engine. Note the unusual, twistgripmounted, cable-operated gear-change mechanism similar to Ducati's.



# 1966 Mondial Record Special

F.B. Mondial brought the passion of its much larger 4-stroke racing motorcycles to the street with its 48cc 2-stroke Record Special. This exquisite and rare 1966 model has had minimal use since new and is 100 percent original and unrestored.



the Italian market at 1.5 horsepower, the 108-pound roadster could be derestricted in some other European markets to reveal a more than credible 4.2 horsepower and 50mph top speed.

The 48 SL came along in 1964, again intended only for the Italian market. Improvements included wheels and brakes from a larger model in Ducati's range. The 2-stroke engine was slowly upgraded. Eventually it became fan-cooled with a large aluminium shroud covering the barrel and head. However, it still featured the much criticized and awkward 3-speed gearbox controlled through a twistgrip on the left handlebar.

Late 1966 saw a mini-upheaval in the range as Ducati thoroughly revised the 48 SL to come up with the 50 SL (standard model), followed a few months later in 1967 by the 50 SL/1 hot rod version.

Both models had a freshly designed, 50cc 2-stroke engine that dispensed with the fan cooling. A 4-speed gearbox brought the model into the modern age, as did the café racer styling of the SL/1.

A higher compression ratio on the SL/1 along with sports porting, an alloy barrel and 18mm Dell'Orto carburetor (as large as any fitted to Ducati's 250/350 4-stroke singles) made 6 horsepower. They were available with high or low-



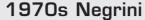
## 1972 Malanca Testarossa

Malanca, a specialist in 50cc models, was established by Mario Malanca in Bologna in 1956. From 1968 it also produced race versions that took Walter Villa and Othello Buscherini to six Italian Championships. This restored 1972 50cc Testarossa has a four-speed gearbox and a top speed of around 90kmh (56mph).



# 1975 Malaguti Olympique V5

Malaguti is one of the very few original Italian motorcycle/scooter firms to survive in family ownership. Since the 1970s Malaguti's large range of small capacity motorcycles and scooters has made it Italy's third largest manufacturer. This 1975 50cc Olympique V5 is powered by a Franco Morini engine and has a 5-speed gearbox.



Negrini, founded in 1954, offered a varied range of small capacity mopeds and motorcycles before its Modena factory closed in 1972. This early 1970s 50cc model is powered by a Franco-Morini engine.



# 1972 Cimatti S5

Cimatti, started in Bologna in 1949, produced mopeds and small capacity motorcycles until 1984. This unrestored 1972 50cc Cimatti S5 has all the café race kudos of a much larger motorcycle. The only unoriginal parts are the header/muffler (from the earlier S4), which runs on the incorrect side for this model.



level exhaust systems.

The SL/1 was a revelation and had so much potential for even more tuning that some buyers quickly converted them to dedicated racers and entered Italy's national 50cc class. But glory was short-lived. The SL was discontinued while various versions of the SL/1 appeared through until the end of 1968. A final model, called the SL/1A, reverted to conventional roadster styling.

By now Ducati's efforts were focused on its larger 4-stroke wide case desmo singles. These were forming the basis of a whole new family of models, including the Scrambler and Mark 3 D 450, which quickly achieved strong sales in export markets, including the U.S. Ducati's 2-stroke micromotorcycles had been overtaken by a new era.

# To restore or not?

Why not restore this American-owned example of Ducati's ultimate micro-motorcycle? Simple. It is an excellent guide for other people's restorations, right down to the Ducatilogoed tire pump mounted on the swingarm. The location of its model-identifying decals and myriad other details can easily get lost when a motorcycle is disassembled. This 1967 50 SL/1, with its gentle patina of low use, is probably worth more unrestored. MC



# GODWOD REVIVAL 2019

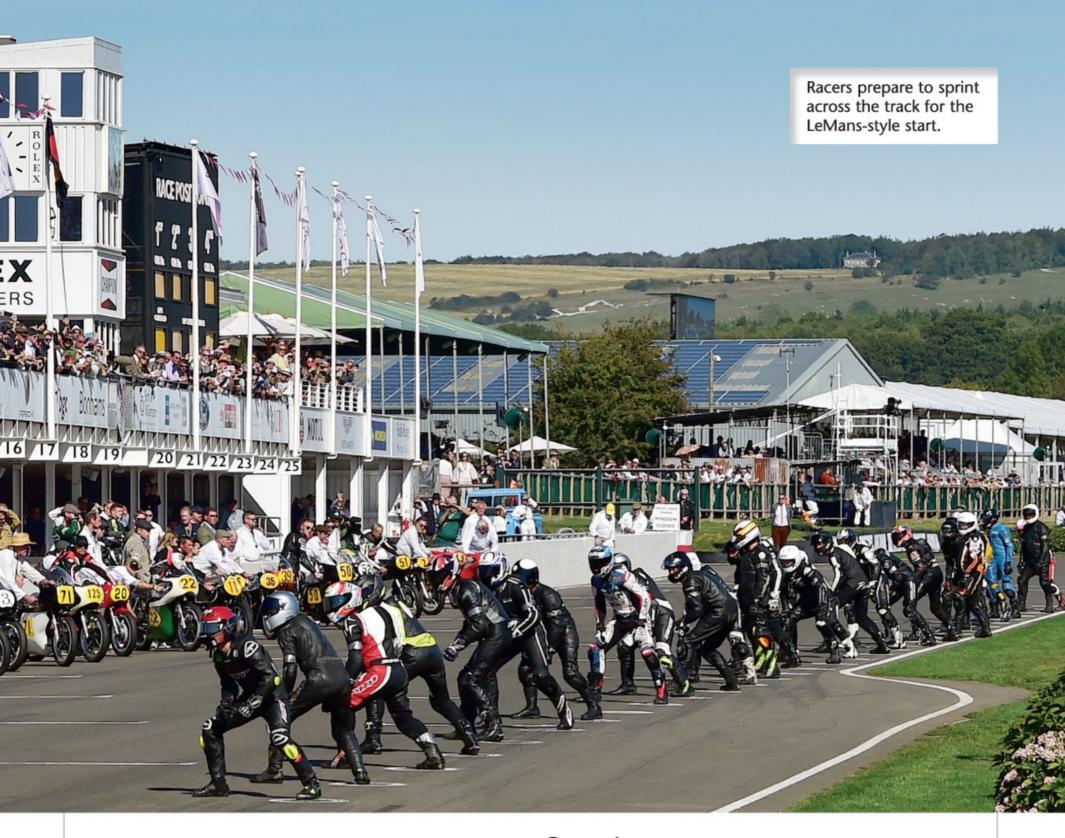
# MotoGP meets all our yesterdays

Story by Alan Cathcart Photos by Chris McEvoy and Oli Tennent

Britain's annual Goodwood Revival is universally recognized as the world's premier Historic race meeting — on both two wheels and four. It's been staged each September since 1998 over the 2.37-mile Motor Circuit opened in 1948 by the Duke of Richmond, and laid out on a decommissioned WW2 airfield, which the RAF had built on his Goodwood estate near Chichester, on England's leafy South Downs.

Catering for the bikes and cars that would have competed at the circuit before it closed first time around in 1966, the three-day event thrills an annual sell-out crowd of 150,000 spectators, almost all in '60s-style period clothing. It complements the annual mid-summer Goodwood Festival of Speed founded in 1993 by the present Duke, after he took over management of the Goodwood Estate from his father.

Until now, the list of riders competing in the Revival's annual two-leg Barry Sheene Trophy motorcycle race has been



headed by a mixture of stars of yesteryear, coupled with current Superbike and Isle of Man TT racers taking the weekend off from their day job. What's more, almost all of them until now have been Anglophone [English-speaking], either British (TT legend John McGuinness and the factory Kawasaki team's Leon Haslam are the best-known current riders to have raced there), Australian (like multiple Goodwood winner and ex-500GP World champion Wayne Gardner, or 2018 Revival winner and twice World Superbike champion Troy Corser) or American — like three-time World champion Freddie Spencer, usually a regular at the event, and from which he was thus absent owing to MotoGP duties at Misano.

But for this year's race the 14 Isle of Man TT race winners on the grid with a total of 84 victories between them were joined by another three-time World champion from Spain — the man who until his retirement from racing at the end of last season rivalled Valentino Rossi as MotoGP's most experienced rider, Dani Pedrosa [see sidebar]. After winning the 125GP World title once and the 250GP crown twice as a Repsol Honda factory rider, Dani finished in the top six places of GP racing's premier class no fewer than 11 times between 2006 and 2017 — including second and third three times each — scoring 31 race victories and 112 rostrum finishes in 236 MotoGP starts. After retiring from racing at the end of last season, Dani signed on for the KTM MotoGP team as a test rider, though injury prevented him from starting work for the Austrian factory until June.

### On track

With the agreement of KTM and sponsor Red Bull, Pedrosa took up an offer to join the only Spanish team to regularly compete in the Goodwood Revival. Owned by Barcelonabased Joaquín Folch, a former motorcycle Historic GP winner and two-time FIA Historic Formula 1 champion, who for many years was the only person to race both cars and bikes at the Goodwood Revival, the team originally entered the 1967 Paton 500cc Bicilindrica on which Billie Nelson finished fourth in the 1969 World Championship, for Pedrosa to ride alongside Joaquín Folch Jr., an experienced Goodwood competitor who finished 10th in last year's race on a Norton Manx. But the fast but fragile Paton developed engine problems in a test session in Spain, so the team's back-up 1962 Norton Manx single was called into play for the two-rider event, which this year was held on Sept. 13-15 in uninterrupted sunshine, and in which all 30 teams change riders in each of the two 25-minute races held on the Saturday and Sunday of the Revival race meeting.

This year's Goodwood Revival saw a star-studded grid of pre-1967 Classics headed by a quartet of fast, musical-sounding, 3-cylinder MV Agustas, although 16 of the other teams rode Manx Nortons, and there were just four Matchless G50s. Single examples of Aermacchi, AJS and BSA Gold Star singles joined a Hansen-Honda twin and a trio of BMWs in completing the grid. One of the BMWs was a very historic bike, the 1962 BMW RS500 OL Special created by Oskar Liebmann using



Charlie Williams on the No. 125 Norton Manx leads the first lap charge during Race 1 on Saturday of the Goodwood festival.

a factory RS500 cammy motor, on which New Jersey-based Kurt Liebmann won several Canadian 500GP championships, as well as cleaning up in European-style club racing in the New England area. Liebmann also defeated the KR750 Harley flatheads to win one of the very first Daytona Classic races on the bike back in 1983, after which the bike was parked in

the family's garage. Californian doctor Scott Williams bought it from the Liebmann family 35 years later and shipped it straight to Germany, where it was prepared for BMW expert Sebastian Gütsch and fast lady Maria Costello to race at Goodwood.

Qualifying produced an upset, with diminutive Richard Cooper, the newly crowned Superstock British 1000 champion, swapping his 2019 Suzuki GSX-R1000 for a 1962 Manx Norton shared with '70s ace Steve Parrish to average 96.42mph in claiming pole position on his first visit to Goodwood. "I like fast circuits, because that's where the fact that I'm short works to my advantage!" said the aerodynamic Cooper, who measures just 5 feet, 3 inches in stature. Just one-tenth of a second slower were regular Revival contenders Ian Bain and Steve Brogan on another Norton. with 2019 Supersport TT winner Lee Johnston and partner Ion-Boy Lee on the first MV Agusta. Former club racer Lee was having his first race for eight years, and had never ridden the Kay Engineering-built Agostini replica before taking to the track in qualifying! "It's a bit different than the Yamaha R6 I'm used to!" he said. "You have to really pay attention to the brakes, which don't work so well in the first place, then fade when they get hot. But it's a brilliant circuit, and seeing the

people all wearing '60s clothes is fantastic!"

Little and large was the theme of Dani Pedrosa's team, with Dani's diminutive 5-feet-2-inch stature and light 112-pound weight contrasting with the 6-feet-2-inch Joaquín Folch Jr. His short stature represented a secret weapon in maximizing the performance of a 50 horsepower bike producing just one-fifth of the horsepower of those he's been used to racing in MotoGP!

After sprinting across the track in the Le Mans-style start to reach their bikes, the first half of the race saw a fiverider pack heading the field, with riders continually trading the lead until Cooper pulled away, taking Lee Johnston's MV Agusta with him. A crowdpleasing wheel-to-wheel battle then ensued, before the Italian bike started to build a lead that was sustained throughout the rider change window up until the checkered flag, with Jon-Boy Lee bringing the MV home 7.484 seconds ahead of another Goodwood debutante,



Dani Pedrosa (No. 26) leads author Alan Cathcart.

Sebastian Gutsch (right) and Maria Costello raced the 1962 BMW RS500 OL Special created by Oskar Liebmann.

Norton Manx mounted outright IoM TT lap record holder and multiple TT-winner, Peter Hickman, teamed with British Classic champion Sam Clews. Matchless G50-mounted Glen English teamed with Richard Molnar, another firsttimer, to finish third, less than a length in front of fellow G50 runners Peter Bardell and James Haydon. Parrish faded to sixth at the end, but at least he finished, unlike three of the four MVs. Potential winners Mick Grant and Gary Johnson blew their bike's engine in practice and did not race, while Ian Simpson and Jamie Whitham completed just one lap in the race before their engine expired, too. France's two-time Superstock 1000 European champion Sylvain Barrier and team owner Barrie Baxter also retired their brand-new MV, but there was a fix for this bike's clutch problem, and it duly appeared in Race 2 held in the same glorious weather the following day.

# Sunday's race

Race 2 saw Clews make a brilliant start, pulling out a two-second lead on his Norton single as Jon-Boy Lee got the MV up to speed. But then the born-again racer started to reel the Manx in, taking the lead on lap 4 and pulling away, to hand over to Johnston with a good margin in hand. But three laps into the second stint the pace car took to the track for

Castrol

the first time ever in a Goodwood Revival bike race, after Jeremy McWilliams' teammate Duncan Fitchett slid to the ground at Madgwick, the fast double-apex fourth-gear Turn 1. He was shaken, but unhurt, As the pace car pulled in Lee Johnston lit the fuse on the 3-cylinder Italian bike and tried to surge away from his single-cylinder chasers — but Richard







Sebastian Perez aboard a Matchless G50 (left), and Sylvain Barrier racing a 3-cylinder MV Agusta.

Cooper wasn't to be fooled, and latched on to the faster MV's rear wheel, using his slight stature to slipstream the faster Italian bike, pursued by Brogan/Bain, Hickman/Clews and — in fifth place, Dani Pedrosa!

The 31-time GP winner had taken over the Norton from

co-rider Joaquín Folch Jr. in 16th place, riding up through the field to sixth in just a handful of laps. He'd come off best out of a thrilling duel with World Superbike racewinner Eugene Laverty, teamed with Tony Perkin on a Manx, with James Haydon/Peter Bardell (Matchless G50)

# Dani Pedrosa Talks About the Goodwood Revival

**AC**: Dani, did you enjoy your Goodwood Revival debut?

**DP**: Honestly, it's way better than I ever thought it would be! I think it's a great experience that anyone who loves motorcycles has to come and be part of, even as a spectator. I must say I'm totally surprised about how the event is actually organized. Every single tiny detail has been thought of, and it's all so nicely presented — it's very English! I don't know how they manage to make everything look like back then, but it's an unbelievable experience, I really like it. I also like wearing my 1960s outfit! When you talk to people, you realize everyone is enjoying themselves, everyone is relaxed, people are super happy, and the place is beautiful, especially

with this perfect weather. It's complete escapism from everyday life, just for a weekend!

**AC**: How about the racing — is it what you were expecting? Was it enjoyable?

with, in the first race I was not so good, but then I managed to recover some places, and then after three or four laps I arrived to a certain point in the field, and I got in a group with Eugene Laverty with the green stripe on his helmet, and one other guy, and we more or less all had the same pace — plus all three of us were current riders, so then we knew, he's coming on the left, he's coming on the right, and every lap we were slipstreaming each other and

exchanging positions. Even the rider swap was super fun — I think we did it very well!

**AC**: Do you like it enough to want to come back again?

they invite me! It's a pity I came here alone this time without any of my friends, but next time I want to bring people with me, and maybe some other Spanish riders, too. Because you have to come here to feel the emotion of Goodwood, to live it, and to experience the whole weekend. You can't get an idea of what it's like to be at this Festival unless you come here, and I recommend it really highly to people to come.

**AC**: How did this first visit come about?





Three-time world champion Dani Pedrosa speaks with a fan after the race (above left) and racing the Folch Manx.





Jenny Tinmouth racing the Hansen Honda (left). Race 1 winners Lee Johnston (left) and John Boy Lee.

and Davey Todd/George Thomas (Norton Manx) also in contention. The Spanish MotoGP ace held the place to the end of the race, which was flagged off two laps early after another current TT Supersport winner James Hillier had a massive highside exiting Lavant, and lay motionless for a time before finally coming to — so for safety reasons they called the race two laps early. Combined results naturally saw the MV Agusta duo take overall victory, with Hickman/ Clews almost 10 seconds back in second place, and Bardell/ Haydon third. MC

**DP**: I got a call from Joaquín Folch who told me that the Duke of Richmond, who owns Goodwood, wanted me to come and ride here at this Revival race. So Joaquín invited me to join his family's team for it and race alongside his son, and I was very glad to accept.

AC: Were there any problems entailed in getting KTM or Red Bull's approval to do this?

**DP**: I asked them for permission to do this race, but they already knew all about it, and were very happy to let me come!

**AC**: What's it like riding a Manx Norton?

**DP**: Well, it's a whole new experience which I've enjoyed a lot. You have lots of low-end power and torque, so you can drive out of the corners quite easily, but not so much acceleration compared to a modern bike. I felt right away at home, because the steering isn't very heavy, so the bike feels quite light to steer. Obviously, the angle you can take in turns on these tires is something to be careful about, but I'd say the biggest difference

compared to a modern racebike are the drum brakes. Oh, and the gearshift being on the right side, which is also a completely new thing for me, so you must be very focused not to make a mistake — I decided to not use the rear brake at all, to avoid the risk of braking with the gear lever! It worked OK — I didn't have any problems in the end. But it's really interesting to go back to the past in this way, and see how they used to do things back then which for whatever reason got changed for today. — Alan Cathcart



The riders' photo, taken with Dani Pedrosa on the No. 26 Norton Manx (center). Dani hopes to race at Goodwood again.

# BIG-HEARTED BEZER

# BSA/Ariel "Flash Four"

Story and photos by Robert Smith

It's a situation familiar to many motorcycle wrenchers: In one corner of the garage is a frame left over from a previous project, and hiding under the proverbial workbench is a similarly orphaned engine.

In Lyle Whitter's case, the engine was a 1949 alloy two-pipe Ariel Square Four Mk1, and the frame was a 1957 BSA A10 Golden Flash. And the question uppermost in Whitter's mind: would the two go together?

The eventual answer was ... yes — but not without some considerable workshop skill and patience.

# The engine

The engine that Whitter used for his BSA-framed custom bore little resemblance to Edward Turner's original design — except for the "Square Four" cylinder layout.

In the 1920s, Turner owned a motorcycle dealership, but his goal was to become a designer for one of the big British motorcycle makers. His calling card was an elegant and innovative design for a 500cc 4-cylinder motorcycle engine. Only Ariel showed any serious interest, offering Turner a job in the engineering and design office working under Valentine Page.

Turner conceived a unit-construction powerplant with two crankshafts of 61mm stroke coupled by central bevel gears, the rear crankshaft also driving the integral 3-speed transmission. Each crankshaft ran on two main bearings inboard of the flywheels with "overhung" roller bearing big ends and steel connecting rods outboard.

A chain spun the single overhead camshaft via a half-time bevel gear driven from the crankshafts. The crankcase was split horizontally, with engine oil stored in the "wet sump." The iron cylinder block was machined for four 51mm bores and capped with an iron cylinder head. The result was a light, compact and relatively powerful engine. Turner's prototype engine was fitted into the chassis of a production Ariel 250cc giving an overall weight of less than 300 pounds, but with 90mph capability. It was scheduled for production in 1931.

In many ways, the prototype Square Four was a typical Turner design: ingenious and audacious but also underdeveloped. Performance would ultimately be limited by the flexibility of the crankshafts, with the big ends being supported only on one side.

The financial collapse of 1929 brought serious rationalization at Ariel. Turner was required to redesign his engine to use a conventional chain-drive Burman gearbox. Fitted



in the chassis of Ariel's 500cc "sloper" single, the resulting 4F/31 model displayed at the Earls Court motorcycle show in London in 1930 was considerably heavier (and slower) than the prototype. Within a year, capacity had been increased to 601cc by adding 5mm to the bore. Ariel won the 1931 Maudes Trophy, a reliability and endurance award, which included the 4F6 Square Four covering 700 miles in 700 minutes.

Turner completely redesigned his engine for 1936 as the model 4G. Gone were the overhung crankshafts, now supported by conventional outboard main bearings. The connecting



rods became light alloy with plain bearing big ends. Straightcut coupling gears for the two crankshafts were moved outboard of the main bearings. The camshaft was moved into the crankcase, which was now vertically split in line with industry practice, and the valves operated by pushrods. Capacity was boosted to 997cc by increasing bore and stroke to  $65\,\mathrm{mm}$  x 75mm. Turner's light, sporting "cammy" 500 had turned into a portly 1,000cc cruiser and sidecar tug.

The 4G ran until 1949, during which time, the chassis' girder fork and rigid rear were replaced by hydraulic suspension

units at both ends. The plunger-type rear used an articulated linkage, designed by Ariel's Frank Anstey, and was intended to maintain constant chain tension through its range of movement. Unfortunately, the Anstey link introduced numerous wear points that required frequent lubrication — otherwise rapid wear would occur, allowing the rear wheel to twist. Regardless, Ariel persevered with the Anstey link frame until Square Four production ceased in 1959.

1949 brought a significant upgrade with the confusingly named "Mk1" engine. Light alloy replaced the cast iron



cylinder block and head, though the exhaust was still siamesed. The "2-piper" featured generous art-decostyle cooling fins around the cylinder head, and many consider this the most elegant of the Square Four engines.

The last of the Square Fours was the 1953-59 MkII "4-piper" with a redesigned top end featuring four separate exhaust headers.

### The frame

Though overshadowed by Norton's "Featherbed," BSA was also at the forefront of motorcycle frame development in the 1950s. Traditional British motorcycle frames evolved from bicycle items and were made in a similar way. Mild steel tubes were assembled into iron lugs, then brazed into place



# 1957/1949 BSA/ARIEL "FLASH FOUR"

Engine: 997cc OHV air-cooled Square Four Mkl, 65mm x 78mm bore and stroke, 6:1 compression ratio, 35hp @ 5,500rpm

Top speed: 90mph

Carburetion: Single Solex 26 AHD

Transmission: Chain primary, BSA multiplate clutch,

BSA 4-speed gearbox

Electrics: 12v, battery/coil with distributor Frame: BSA A10 Golden Flash dual downtube full

cradle, modified

Suspension: BSA Telescopic fork front, two coil

spring/damper units rear

Brakes: BSA/Triumph 8in (203mm) TLS drum front, 7in (178mm) SLS drum rear

From 100/00 v 10in front 11

Tires: 100/90 x 18in front, 110/90 x 18in rear

Weight (wet): 400lb (182kg) Seat height: 32in (813mm)

Fuel capacity/MPG: 4.2gal/55mpg (est.)



The Flash Four uses a GPS-based speedometer and a wireless tachometer (above left). The Solex carburetor is made up of leftover parts from another project (above).

in a furnace using a filler metal with a lower melting point, such as bronze or brass.

Making frames this way suited mass production and unskilled labor. But

the cast lugs were expensive and heavy, and the advent of new materials and techniques allowed frame tubes to be welded together without lugs. Welding with low-temperature bronze also allowed thin-wall chrome-moly tubes to be welded without compromising their strength.

BSA's welded frame also used a dual-loop cradle design like the Featherbed, but with a single, large diameter top tube





and a bracing tube below, triangulating the steering head. The new frame was introduced on the Gold Star in 1953 and the "A" model BSA twins in 1954, giving the Goldie and topof-the-range bikes like the Super Rocket their reputation for sweet handling.

Though always in the shadow of the Featherbed, the new

BSA frame also became popular with specials builders, for example with a Triumph engine ("TriBSA"), or even for offroad use, like the VeloStar scrambler (see Motorcycle Classics, September/October 2016).

### The build

Shoehorning a Square Four engine into a Featherbed has been done before — even without modifying the frame (see Motorcycle Classics, March/April 2010). But a BSA frame?

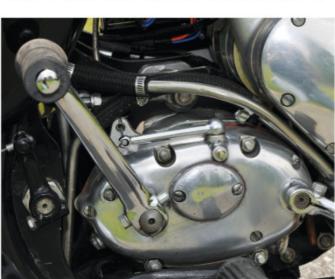
Lyle Whitter is a fan of both BSAs and Ariels. His daily ride is a 1960 BSA A10 Golden Flash, and his Sunday bike is a 1953 Square Four MkII, which he rebuilt from a basket case. Along the way, while collecting parts for the Square Four restoration, Whitter bought a Mk1 Square Four engine — the all-alloy 2-piper.

The frame for the Flash Four came from a complete A10 that Whitter had earmarked for restoration. But an inspection of the engine revealed it had been blown up and crudely repaired. That's when the idea for the Flash Four popped up.

"I was lying in bed one night and I remembered. 'Why don't I try? I've got enough pieces to put this 2-pipe engine together.'

"So I assembled (the engine and frame) loosely to get dimensions. I could see I had to cut the frame and put a belly in the tubing to accommodate the crankcase. I had tubing









Clockwise from top: The completely hand-done primary; the bike uses a modern 12-volt electrical system; ample finning on the "2-pipe" cylinder head; the BSA A10 gearbox.

# "A few pieces went missing. I had to machine them up, put them together."

bent and then welded it in. And then started making mounts and aligning."

Sadly, the '49 2-pipe engine wasn't in the best of shape.

"Most of the bolts were missing, but it was basically complete. It was pretty gross inside, you could see lots of water. It looked like it had been sunk," Whitter says.

Fortunately, the crankshafts had survived undamaged, and were appropriated for the 1953 MkII rebuild. The crankshafts now in the Flash Four were supplied by Draganfly Motorcycles in Bungay, England (draganfly.co.uk). The original crankshafts from the '53 went back into Whitter's inventory. Rebuilding the '49 engine, though, required plenty of acquired experience with Square Fours and a generous supply of new and used parts — as well as Whitter's expertise as a former marine engine fitter, which also came in handy.

"I poured my own main bearings just to try it out, to see if I could do it, and machined them myself."

Four connecting rods left over from the '53 were pressed into service after checking that they were in good shape. Whitter then installed a new set of cylinder liners, using a barbecue to heat the block. He then had the cylinder block

"decked" (machined flat and square).

"A friend of mine had a brand-new set of pistons that he'd got from New Zealand. But he wanted to use some older ones in his bike. So, he decided to sell them to me. They're all standard bore."

The valves and guides required another mix and match. Whitter had a set of valves in his '53 that kept seizing. He replaced them, and the old valves were installed in the '49 engine.

"So, I used the new valves on my '53, and the old valves, I put them in this one because their guides were a little bit more (loose), but it made it perfect."

Similarly, the carb on the '53 had been assembled from the best parts of two Solexes. Whitter used the leftover pieces to build a new carb.

"A few pieces went missing. I had to machine them up, put them together. And it actually runs very well with it."

Mating the Square Four engine to the BSA transmission took some ingenuity. Whitter used a complete BSA A10 clutch and gearbox.

"I had an Ariel inner primary that I had to cut to adapt.



Owner and builder Lyle Whitter aboard his Flash Four creation.

The outer primary is completely hand done. Homemade. And lots of machining. That was a lot of work."

Whitter also had to make some significant repairs to the BSA frame, including fabricating the engine and transmission mounts. The kickstand lug was missing, so that had to be re-welded. Whitter also converted the steering head for taper-roller bearings. The oil tank had to be modified to suit the Ariel's particular number and size of oil lines, and to accommodate a filter. The exhaust headers and pipes came from a '52 2-piper, and the front brake is a twin-leading-shoe unit from a 1968-1970 BSA twin. Whitter also notes the help he got from local master alloy fabricator and welder Peter Dent, who made the front fender and chainguard.

"I guess it becomes a process of, as you move forward, you find obstacles and you have to overcome them. You have to make sure everything fits. That's the problem."

Whitter wanted to include a modern 12-volt electrical system, and Draganfly recommended a unit from Iron Horse Spares in the U.K. (ironhorsespares.co.uk). They supplied a 300-watt alternator and regulator/rectifier system that fits inside the original DC generator casing, complete with distributor drive.

Whitter is delighted with the Iron Horse product: "Superb machining. Just superb."

Whitter also fitted a GPS-based speedometer and wireless tachometer, but is chasing down some gremlins in the instruments. Otherwise the project is pretty much complete. Whitter admits he hadn't been a big fan of the 2-pipe engine, prefer-



ring the appearance of the 4-pipe. So how does he feel about the finished project?

"As much as I didn't like a 2-pipe engine at that time, I admire them now," he says, noting that the 2- and 4-pipe engines "feel the same as far as torque goes."

"To me, it's an absolute delight of a bike to ride. Smooth, torquey and handles like a dream. It's much smoother than my Golden Flash, and a nicer handling frame than the Square

And how does it compare to Whitter's 1953 Ariel?

"It's just a nicer-feeling bike. Just the way you can flick it into corners. But there again, I've got alloy wheels and nice tires on it."

Any other comments? "Just a lot of thanks to friends that have helped with the project." MC

# **Edward and Valentine: A Real Page Turner**

Though both Val Page and Edward Turner were talented motorcycle engineers and designers, it's hard to imagine two more different personalities — at least, based on contemporary reports. In his book Edward Turner: The Man Behind the Motorcycles, Jeff Clew admits "much has been written about his (Turner's) irascible temperament, his intolerance and his autocratic style of management ..." By contrast, Clew describes Page as "a modest, kindly man, a true gentleman in every sense of the word."

And while their professional paths were bound to cross, Page seems to have tried to avoid working with Turner after their spell together at Ariel. Hired as designer and engineer in 1928 by Ariel, Turner worked under Page for four years before Ariel went bust in 1932. Page moved to Triumph, and Turner was installed as chief designer in the reborn Ariel company. When Ariel owner Jack Sangster bought the bankrupt Triumph company in 1936 and installed Turner as general manager, Page left for BSA.

And when BSA bought Triumph in 1951, Page returned to Ariel (though it was now also a part of the BSA Group).

But whatever their personalities, between them Page and Turner were responsible for the most iconic of classic British motorcycle designs, including the Gold Star, World War II workhorse BSA M20, the Ariel 6/1 twin, Ariel Leader and Arrow (Page), and the Speed Twin, Red Hunter, Triumph Terrier and Cub, and, of course, Triumph Bonneville (Turner).



# CONCOURS DE COMPETITION

# A new kind of motorcycle show

It isn't often that David Rutherford is invited to a new type of motorcycle event.

He has road-raced for decades, toured in the U.S. and Europe extensively on a variety of sport bikes, raced flat track occasionally, run the Pikes Peak International Hill Climb six times, raced the Baja 1000 and the Baja 500 several times, and has ridden the course at the Isle of Man. When he was approached about participating in a "new" kind of

concours event he was somewhat skeptical. The idea of standing around next to your motorcycle was not exactly his kind of event.

The promoter invited him to apply to run in the Inaugural Concours de Competition at Barber Motorsports Park. David knew the facility well since he had raced there during the annual Vintage Festival with AHRMA for the past 14 years. The museum at Barber Motorsports Park is world-renowned for the largest, and arguably the best, motorcycle collection in the world.

The Concours de Competition was the idea of longtime motorcycle enthusiast and racer Ron Raven. The premise was simple: Race bikes were meant to be seen and heard at speed on a track. Collectors of race bikes generally retire the special ones and they become static displays in homes, offices and garages. Once their competitive careers are over, they tend to be fawned over in a safe environment as fear of damage and lack of parts prevents them from being run on a track. Raven wanted to get them back on track in a moderately safe environment so they could be used, and appreciated, for what they truly were mechanical art in motion.



Working with WERA

took place on June 29 at the Barber Motorsports Park. Raven enlisted two partners: WERA Motorcycle Roadracing working with the Barber Museum. The event ran in conjunction with WERA's Sportsman round at Barber Motorsports Park that weekend. WERA and the Barber Museum had the ability to give the event its unique twist: To get into the Concours judging round, the contestants must first have made several laps at speed on the track. The bikes would be judged on a combination of preservation, track perfor-



Jeff Palhegyi and his cool display of Yamaha racers, including a YDS1R (left).



Another great display, the 1983 Honda CB1100F racer owned by Erv Kollek.



The inaugural Concours de Competition

WELCOME WERA MESA

Bikes that raced from the mid-1950s until 1989 could enter the Concours de Competition. The "go" class was limited in order to provide adequate track time and safety. Collectors wishing to enter sent an application with a photo to the museum. If accepted, the promotor paid the fees for their entry, rider and crew. There was also a concurrent Concours d'Elegance "show" class for vintage road racing bikes up to 1989 located in the

mance and educational exhibits.

Most of the team that created the Concours. From left to right: Evelyne Clarke, CEO WERA Roadracing; George Barber, founder of Barber Motorsports Park and Museum; Ron Raven, organizer; Jeff Ray, executive director of the Barber Museum; Brian Slark, museum restoration specialist and chief judge; Guy Reynolds, museum lecturer and second judge. Missing from photo are Mitch Cato, tech inspector and Bill Wilder, paddock marshal.



A display of vintage race bikes brought out of the Barber Motorsports Museum just for this new event.

same paddock, but the "show" class did not go out on the track.

Evelyne Clarke, CEO/owner of WERA said, "From their earliest years in the 1970s we have always had classes available for "vintage" bikes to preserve the heritage of the sport. Of course, those "new" bikes back then now run in our vintage classes. This is a chance to get the bikes that are the history of our organization back out on the track for our current members and the public to enjoy again and see the history of this sport."

Jeff Ray, Executive Director of the Barber Vintage Motorsports Museum added, "One of the guiding principles Mr. Barber set when founding the museum was that the bikes displayed had to be capable of running. These machines were not meant just to be static displays of engineering art, but rather were to be seen and heard as they were designed. There is a reason the galleries overlook a

world class racetrack."

Unique trophies for the winners of both classes were designed and made by the Barber Museum in its extensive restoration workshop. The "go" class trophies were mounted on pieces of the racetrack which had been removed for repairs. It was generally agreed that there may not be any cooler trophy in the world. As Jeff Ray put it, "Nobody can buy a piece of this track, but somebody will have a chance to win one today."

### David's bikes

David applied to enter three bikes in the event: his 1959 BSA Gold Star 500 in the "go" class; and his 1965 BSA Trackmaster 750 Pikes Peak bike and a 1986 Harris SRX 600 in the "show" class. He occasionally races the Harris, so it was conveniently safety wired and ready for tech inspection, if needed. The Pikes Peak BSA, although still bearing dirt from its

last visit to the mountain, was retired and was purely there for show. The main bike of the day was going to be the Gold Star. It was last raced in earnest at Mid-Ohio several years ago, but transmission woes had sidelined it. In preparation for the event, David swapped the standard transmission for a special RRT2 (close ratio racing) box. This was just the chance he wanted, to take it out onto the track for a few laps without trying to squeeze the last tenth of a second to gain another position. This was a day where he could let it run, enjoy the ride, put it on display and talk about it to the spectators.

The day began by setting up the tents, bikes and displays. Just prior to the first track session David put the Goldie on the rollers to start it, pulled in the clutch lever, and promptly snapped the aged and well-used clutch cable. With a little help from the organizers and the tech inspector, the Harris SRX was substituted



The winning bikes in both the "show" and "go" classes, including the 1976 Kawasaki Lester Wheels endurance racer (left).



into the "go" class and the Gold Star was now "show" only. WERA provided the Concours entries two 15-minute sessions in the morning to try to get the minimum number of six laps completed to qualify for the judging round later in the afternoon. David and the Harris SRX completed five laps in the first session.

However, when word got out that the Goldie was not going to run, the museum's Jeff Ray arrived at David's pit. Taking the broken clutch cable, he returned to the restoration workshop and had a new one made! The replacement cable was installed between the qualifying sessions, and the Goldie was now ready to go out. The ever-patient organizers and tech inspector approved the switch back to the "go" class, and the big, deep bass sound of the open megaphone BSA 500 single echoed around the track for five laps.

Now David had a dilemma. Neither bike had the required six laps in to get to the judged event in the afternoon. But

the six laps "racing exhibition" was still to come and he could get the needed lap then, but he would have to finish and ride back to the paddock to qualify. It was clear to David that this was the day to ride the Gold Star at speed again, so out it went and five laps later he rode it proudly back to the paddock.

Now it was up to the judges. The chief judge, Brian Slark, restoration specialist at the museum, has seen nearly every kind of motorcycle produced in the last 50 years. He has taken apart many of those and has an eye for originality. He has been called upon to be a judge in major concours across the country. For this event, the organizers had specified the bikes could either be restored to the condition they were when new or to some point in time in their race history; or, they could be preserved as they were when they last competed. The Gold Star was





More winning bikes (left). The "go" class trophies are set in a piece of asphalt taken from the track (right).





Dave gives the crowd a thumbs-up standing behind his Gold Star (left). Show class winner Jim Henshaw and his award (right).

in preserved condition and presented as such. "It is very tough to decide on a winner today since there are so many different eras and manufacturers present," Brian commented.

The judges looked, asked questions, moved on and circled back to check their notes. The owners' displays that show-cased the bike or rider's history were also checked. Some displays were very elaborate, while others were quite simple. It was clear that all three criteria were being examined. Five of the bikes in the "go" class were eliminated for either failing to make the minimum required laps or arriving back in the paddock on the crash trailer.

### The show

Soon the announcement went out to bring certain bikes and their stands to the officials' tent. The Gold Star was on the list! First up was the "show" class. Third place went to Bill Brown for the ex-Rich Arnaiz 1987 Yamaha FZR750 which had won the AMA National at Elkhart Lake in 1989. Second place went to the 1976 Kawasaki Lester Wheels endurance racer, winner of several WERA 24-hour races in the late '70s. The winner in the "show" class was Jim Hinshaw's 1970 Kawasaki H1R which was still in original condition. It had patina so deep it was measured in inches rather than millimeters. The displays documenting its history racing around the world made the story of the bike come to life. Jim was warmly congratulated for remembering a bike is original only once and keeping it that way preserves its history.

### The go

Next it was time for the "go" class winners to be announced. Third place went to Mitch Cato's 1988 Yamaha FZR400

which sparkled when parked under an unbelievable pit display, but it was the display on the track that set it apart. This little bike showed everyone else the way to the checkered flag while clearly showcasing everything it had. Then the Gold Star was called, second place in the class and David was given a trophy with a piece of the track. The largest piece of the

A PART OF THE PART

Michael Hodgson Jr. (left) and his father Michael Hodgson (right).

track went to Doug Bowie who rode his beautifully presented 1985 Ducati F1-750 Montjuich. Doug rode every lap of every session at speed with that big twin barking out its deep notes.

There was still one award to go. The judges could select Best of Show from either class. They chose Michael Hodgson's 1976 Rickman CR Honda 750. The bike was stunning, it was beautifully

presented, and it was ridden wonderfully for every lap of every session.

David was, as British aficionados say, "Over the moon." "Where else in the world could you break a clutch cable on a 1959 DBD34 Gold Star 500 before the first qualifying session, have a replacement fabricated and back on the bike before the second, and go on to compete

and have a place on the podium? Unbelievable! Only with the generosity of the Barber Museum folks. The opportunity to ride a valuable classic bike at speed and on a challenging track, without fear of some overzealous rider punting me into a gravel trap for a plastic trophy, and to be in the presence of genuinely unique and special machines was a perfect day. I only hope to have the opportunity to do this again. The Concours de Competition is a unique, special event. Cheers to everyone who made it happen."

The 2nd Annual Concours De Competition Et D'Elegance takes place July 4, 2020. If you would like to enter next year's event watch wera. com or the Concours de Competition Facebook page for the procedure to apply to participate, or contact Brian Slark at bslark@barbermuseum.org

Author's note: Ron Raven is a lifetime WERA and AMA member. He ran his first WERA race in 1975 (when it was still the Eastern Roadracers Association) in the "Thumper/Vintage" Class. He raced in various small bore and vintage classes 1975-2006 and ran in the national endurance series from 1980-1983. Since retiring from competition, he has sponsored several vintage class awards. He created a series of vintage handicap races which paid cash prizes at selected WERA and AMA VMD events. He organized the Concours de Competition.







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# DEVILIN DISGUISE

# 1948 EMC 350 Grand Prix racer

Story by Alan Cathcart Photos by Kel Edge

While struggling to establish the fledgling bike business he'd founded in 1946, Joe Ehrlich developed a water-cooled EMC split-single 2-stroke GP racer. The bike used a ladepumpe supercharging piston in a design clearly based on the prewar DKW factory racer with which Germany's Ewalde Kluge won the 1938 Isle of Man Lightweight TT — the first non-British bike/rider combo to do so.

Fitted in a twin-loop frame with a girder fork and plunger rear suspension, in the hands of all-rounder road racing and scrambles star Les Archer, the 250cc EMC won the prestigious Hutchinson 100 held at Britain's first post-war National race meeting at Dunholme in 1947. Buoyed by that success, Ehrlich produced a 350cc version of the bike, now with Dowty telescopic forks but still a plunger rear end, which Don Crossley rode in the 1947 Manx GP. However, such was the supercharged engine's prodigious thirst that it ran out of fuel on the Mountain on lap 3 en route to a planned single fuel stop for the six-lap race. Oops!

So for 1948 Ehrlich completely redesigned the motorcycle, with a much larger 5-gallon (22.5-liter) fuel tank atop a revised tubular steel duplex frame with a cast aluminum backbone and steering head unit carrying an inverted 1.5-inch (38mm) Dowty oleopneumatic telescopic fork — yes, an upside-down fork in 1948! At the rear there was now a tubular steel swingarm with twin Dowty shocks — again, oleo-pneumatic. The revised engine was now fully water-cooled, and claimed to produce 40 horsepower at 5,500rpm, compared to the 32 horsepower at 7,000rpm of the new, more conventional AJS 7R "Boy Racer" SOHC 4-stroke, which was also 13 pounds heavier than the 285-pound 2-stroke — though probably slightly lighter when fully fueled. So to stop what by prewar DKW standards undoubtedly had the potential to be a very fast bike, Ehrlich had produced beautifully cast aluminum conical hubs housing EMC's own single-leading-shoe drum brakes, an 8-inch front and 7-inch rear, both housed in 20-inch wheels with Borrani aluminum rims.

The new EMC was entered for the 1948 Junior TT to be ridden by Archer — but at the behest of the newly formed FICM (the FIM's predecessor) the ACU returned Ehrlich's entry form just six weeks before the race, stating that the EMC infringed the FICM's recent ban on supercharging introduced in April that year for all International events. Joe spent a lot of time contesting this decision, but ultimately failed to get it reversed, thus making his purposeful-looking new 350 GP model obsolete overnight — just like another later stillborn Italian victim of bureaucratic chicanery, the 1969 V4 Villa 250.

# Moving on

The single such EMC 350 Grand Prix racer constructed was then sold to a friend of Ehrlich's named Wally Walters, who rode it on the street apparently very happily for a year before selling it back to Dr. Joe. It then languished in the workshop of his palatial Hertfordshire mansion for the next four decades before he sold it together with five other EMCs of various types representing his own personal collection to the irrepressible Sammy Miller for display in his Museum (sammymiller.co.uk) on Britain's South Coast.

This EMC corner of the Museum includes a sectioned split-single engine plus a showcase display of its dual-connecting-rod layout, seeing which makes this somewhat improbable format more understandable, as well as Ehrlich's claims that it delivered enhanced control of the transfer and exhaust ports, improved port timing, and better volumetric efficiency.

On acquisition in the late 1980s, the water-cooled 346cc EMC was completely restored to full working order by Sammy's recently retired mechanical magician Bob Stanley, who reports that it was "a basket case, but fortunately complete!" when it arrived at the Museum. Over a 6-month period he completely rebuilt the engine and 4-speed Burman gearbox, with new pistons, bearings and oil seals, and refurbished the frame. The result is an undeniably handsomelooking motorcycle, albeit with its avant-garde front suspension and unique mechanical package sitting slightly ill at ease with the plank-like seat. But the chance to ride it around the access roads of the museum estate revealed a bike that's impressively modern in its behavior, as well as surprisingly flexible and forgiving at lower speeds.





# 1948 EMC 350 GRAND PRIX

# The engine

The EMC's split-single piston-port 2-stroke water-cooled engine measuring 50mm x 88mm (times two) features sandcast aluminum crankcases surmounted by a vertical cast-iron six-stud cylinder block containing tandem-twin bores holding a pair of long-skirted (111mm rear and 99mm front) Specialloid pistons, each with three compression rings — unusual for a 2-stroke, which nowadays would have only one. These are mounted on an articulated dual-connectingrod assembly running on caged roller crankpin bearings, with the crankshaft carried in ball and roller main bearings. With the forward cylinder having three transfer ports, there are two inlet ports and twin exhausts in the rear bore, with the straight megaphone exhausts running directly rearwards from the cylinder block.

By dint of the exhaust ports opening and closing earlier than the transfer ports, this gives improved mixture distribution as well as exhaust scavenging, compared to conventional single-cylinder 2-strokes. The engine's single 14mm spark plug is positioned in the front of the common-to-both-bores nine-

Engine: 346c liquid-cooled split-single piston-port

2-stroke, 50mm x 88mm bore and stroke (x2), with tandem cylinder bores, *ladepumpe* supercharger, three transfer ports in forward bore, and three exhaust and two inlet ports in rear bore, 7.4:1 compression ratio, 40hp at 5,500rpm (claimed)

Top speed: 90mph (est.)

Carburetion: Two 28.5mm Amal with remote float chamber

Transmission: 4-speed Burman with chain primary drive Electrics: Lucas magneto, chain-driven off crankshaft Frame/wheelbase: Duplex tubular steel frame with cast aluminum backbone and steering head/54in (1,370mm)

**Suspension:** 38mm Dowty oleo-pneumatic telescopic fork front, swingarm with dual Dowty oleo-pneumatic shocks.

Brakes: 8in (203mm) SLS drum front, 7in (178mm) SLS drum rear

**Tires:** Front: 3 x 20in front, 3.25 x 20in rear **Weight:** 285lb (130kg) dry

Fuel capacity/MPG: 5gal (22.5ltr)

stud aluminium cylinder head, over the front piston. So with the rear piston travelling in the bore ahead of its forward partner, it opens the exhaust ports well in advance of the transfer piston opening its ports, hence the optimized scavenging of the exhaust gasses. But then, still leading, it shuts the exhaust port while the transfer is still open, minimizing the loss of the fresh inlet charge thanks to the asymmetric timing.

However, induction is optimized by the fitment of a large-diameter ladepumpe pumping piston measuring 130mm x 40mm which faces forward at right angles to the "working" pistons. The crown of this piston faces inwards, and it is driven by two slim conrods mounted on large-diameter eccentric attachments to the outer surfaces of each crankshaft web, with the small

ends located into pockets machined in the piston crown. The suction stroke draws extra mixture into the expanding crankcase volume, and the delivery stroke pressurizes the crankcase before shooting the mixture through the three transfer ports. The engine is sparked by a Lucas magneto chain-driven off the crank, and is mated to a 4-speed Burman gearbox via a chain primary





drive and a dry clutch.

Once warm, the EMC push-starts as easily as a conventional 2-stroke, with a wall of sound denoting that it is ready for action.

Kluge's DKW could reportedly be heard in Liverpool descending Bray Hill on the TT Course, and even if that's apocryphal, the similar EMC is indeed VERY loud. Yet despite this it seems pretty modern in its behavior, with the light-action dry clutch feeding out easily to obtain forward motion via the Burman transmission's rather heavy onedown/three-up right-foot gearchange. The 8,000rpm Smiths rev counter wasn't working, but the split-single engine seemed amazingly flexible. If I wished, I could select top gear at around 25mph, then crack the throttle wide open to get a far from sluggish drive towards the horizon — especially once the engine starts to pick up revs faster from what Bob Stanley told me was 4,000rpm upwards, before peaking out at 5,500rpm when it's best to hunt for a higher gear. Besides the twin 28.5mm Amal carbs, the throttle also controls the flow of lubricant via a Pilgrim pump from the small oil tank under the seat to the main bearings and rear cylinder wall, whereby the wider the throttle opening the greater the flow of lubricant from the pump. Nevertheless, Bob Stanley told me he ran 50:1 premix in the fuel "just to be on the safe side!"

### On the boil

The EMC's engine is very smooth even at higher revs, with no real hint of vibration even cranked wide open in the gears.

But do that, and you can't escape consuming fuel at a prodigious rate, hence the big pistol-shaped fuel tank I could wrap my arms around at speed. The bulk of the tank belied the EMC's compact 54-inch wheelbase — this is really quite a small-seeming bike when you straddle it at rest, except for that hefty tank which has nevertheless been cleverly developed to hide its extra real estate well.

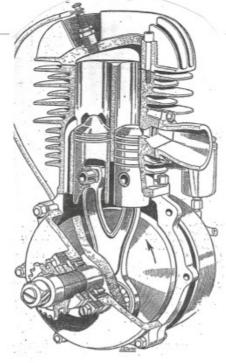
The use of 20-inch wheels is paradoxical proof of the EMC's vintage era ancestry, and I will admit to treating the ancient front Firestone with a good deal of suspicion, so keeping up turn speed wasn't really an option. But the upside-down Dowty fork did a reasonable job of ironing out the bumps in the short test track I was using, though it was a bit bouncy — I think they still had a bit to learn about rebound damping back in 1948.

There was better compliance from the twin-shock rear end, once Bob Stanley had topped up the air pressure to 20psi. Those goodlooking brakes actually worked pretty well, too — with minimal engine braking from the 2-stroke engine, you'd need good brakes, and EMC would seem to have



The dual open exhaust is surprisingly loud.







The 346cc split single 2-stroke engine makes a claimed 40 horsepower at 5,500rpm, fed by two 28.5mm Amal carbs.

obliged, though there was better bite from the smaller 7-inch SLS rear than from the larger 8-inch SLS front — maybe thanks to pad choice?

The split-single design and the porting chosen by Ehrlich resulted in a pretty torquey engine, and this coupled with the heavy flywheels makes the 350cc EMC unexpectedly nice to ride. You can cut down on gear-changing because

of this, and the engine has a level of grunt that's quite unexpected for a racing 2-stroke of any era, making it pretty docile at low revs. But get it wound up and it certainly flies, accompanied by that raucous exhaust note. You'd need to wear earplugs to ride this in a two-hour TT race, or else risk losing your hearing for life!

It's a pity that the 350cc EMC never reached the starting



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#### **The Sammy Miller Museum**

The Sammy Miller Museum (sammymiller.co.uk) in New Milton, Hampshire, U.K., is crammed full of interesting machines — including factory prototypes and numerous ingenious designs from all over the world. It also counts as one of the world's largest collections of exotic racing bikes, all of them in running order and including the legendary Moto Guzzi 500 V8, the supercharged AJS 500 V4 and post-war Porcupine, and innumerable famous bikes from Triumph, Norton, AJS, Velocette and many more. There are also offroad enduro, motocross and trials icons. The museum is open to visitors daily from 10 a.m. year-round.

grid, because with its swinging-arm rear suspension with twin telescopic shocks and its upside-down tele fork, it was a design which looked forward rather than back. But it would take another 20 years before 2-strokes of a very different type began to dominate race grids around the world, and a quarter-century before Agostini won the first 350cc World title for a stroker in his debut 1974 season with Yamaha.

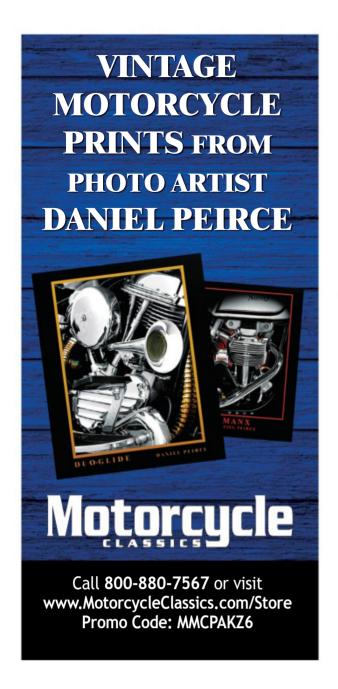
The stillborn EMC seems a true crossroads bike with the potential to be successful, as witnessed by Archer's Hutchinson 100 race victory the year before its creation. But the rule book prevented Joe Ehrlich from ever dem-



onstrating his design's values. It would take him until the early 1960s and his de Havilland-backed 125cc rotary-valve singles before EMC became a winning brand.

Today, his 350GP racer lives on as a testament to his drive and inventiveness in always looking ahead to the next step in development, as someone perpetually dissatisfied with the status quo. A promise unfulfilled? Yes, but another step on the path to building a better 2-stroke. **MC** 







Circle #5; see card pg 73



Circle #6; see card pg 73

# Motorcycle

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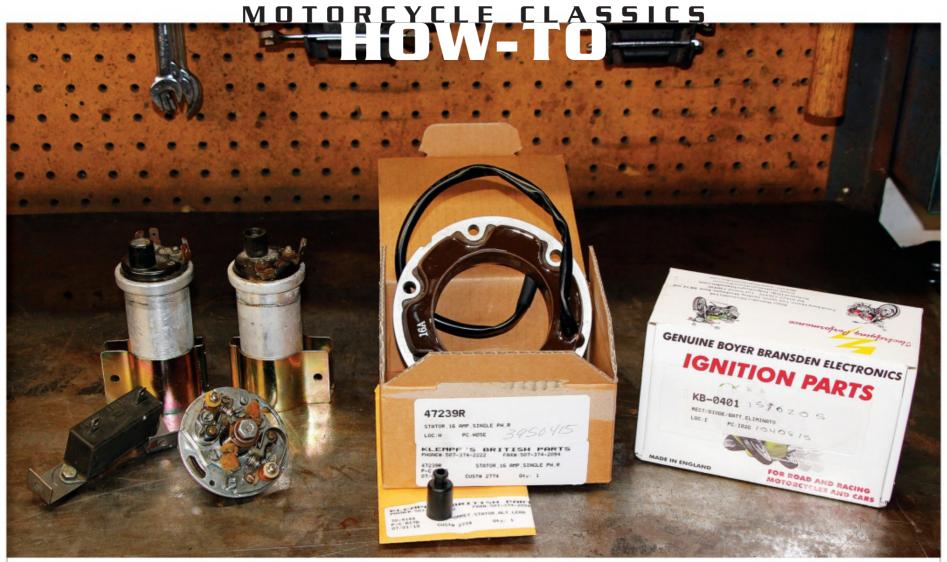
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All the new (and used) parts needed to convert our 1964 Triumph T100SC Tiger, laid out and ready for installation.

# Converting a Triumph 6-volt charging system to a 12-volt charging system for better lighting

here comes a time when practicality overcomes originality, and a good example of that is our project for

Transfer (ET) ignition Triumph over to 12v while retaining the original no-battery look of the ET system. For that we used a 12v Lucas alternator and a Boyer Power Box, both sourced from Klempf's British Parts in Douglas

Center, Minnesota (klempfsbritishparts.com). I explained to Mitch Klempf that I wanted better lighting, but didn't

want to alter the look and he agreed that changing the alternator and putting a Power Box up under the seat would keep the look while allowing me to see the road ahead at night. This How To will show you how you can do this too if needed or wanted.

# BikeMaster.



We'll begin by removing the left footpeg and lowering the brake lever for access to the primary drive and alternator.



You'll also need to slacken off the primary chain tensioner and drain the oil from the primary. As the primary screws are of various lengths, it helps to draw a schematic on a piece of corrugate and punch the screws through in their proper places.



Remove the nuts holding the alternator in place. Disconnect the five leads from the wiring harness and remove the alternator. Due to age and heat, the wires and sealing thimble may be stiff. Gentle heat from a heat gun can soften things up for easy extraction.



The original ET alternate.

unencapsulated open wiring and

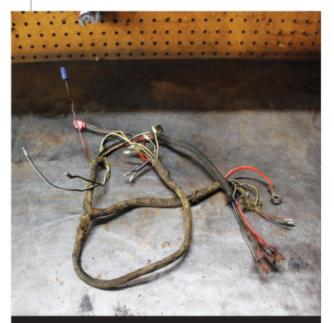
The original The original ET alternator was most have failed by now. The original ET coils likewise had perished and had been replaced with EMGO coils that worked in the same way as the originals. This alternator appears to have had some epoxy applied to it in the past.



Hang the new alternator temporarily from one of the studs and feed the wires first through the new sealing thimble and then the inner primary case. It can be hard to feed the wires through, you may have to strip away some of the PVC jacketing to allow you to pass them through one at a time.



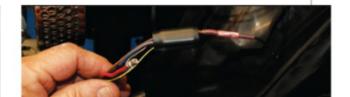
Clearance between the rotor and the alternator is vitally important. You must have .008-inch clearance around the gap between the two. Using a single feeler gauge is not enough. A better method is using a piece of shim stock .008 inch thick and getting enough for 4 strips. I couldn't find plastic of the correct thickness, so I bought brass shim stock and added adhesive tape to reach .008. When you have the correct clearance, tighten the alternator bolts to 20lb/ft.



After some disassembly it was apparent the original wiring harness was butchered beyond use, so we are moving forward with a new one.



Find a place to mount the Power Box. We put it here, where the battery would be if we had one. Attach the two leads from the new alternator to the yellow leads into the Power Box. This is AC so it doesn't matter which lead from the alternator goes to which yellow lead.



Now comes the tricky part, wiring. We're turning an unregulated low output AC system into a fully regulated high output DC system. We begin with the alternator, the old system had five wires from the alternator. Four of these wires carried AC current and the red one was the ground. The easiest way to use the old harness (or a new one) is to connect all four of those wires to the black lead from the Power Box. That powers up all the wires with -12v. We're keeping it positive ground for simplicity's sake. Connect the red lead to the red lead from the Power Box.



Remove the points cover for access to the points plate, auto advance unit and points wiring. Remove the pillar bolts and pull the points plate out of the cavity. Disconnect the points wires.



Remove the bolt holding the auto advance unit to the cam. Ideally you will use the auto advance extraction tool shown in the next step to pull the advance unit out.



Start by loosely threading the tool into the threaded portion of the advance unit. Then screw the inner pin in until it touches the end of the cam inside the timing cover. Tightening the bolt then will break the taper connection holding the advance to the cam. If you don't have the tool, you can thread a 5/16-inch x 24 bolt into the end of the advance unit and gently tap it from the side to break the taper connection.

#### MOTORCYCLE CLASSICS



Due to the odd nature of the ET system, we will have to make some changes to the points wiring. We're also taking this opportunity to change from the old 4CA points plate to the newer 6CA points plate with individually adjustable points timing.



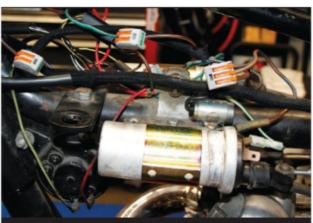
We're changing the old 5 degree advance to a 12 degree advance, taking advantage of the steady 12v from the Power Box. The advance is limited with the ET ignition due to the need to fire the coils at the peak of the AC waveform from the alternator.



The ET coils (modern version by EMGO) will be replaced by a pair of 12v Lucas coils I had in my junk box. Both bench tested ok.



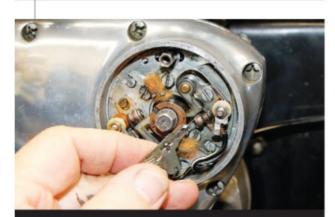
New 12v prefocus headlight bulb and standard 12v tail/brake light bulb. Also, a 12v instrument bulb (not shown). The old 6v horn will work ok on 12v for the intermittent use it gets.



Mount the coils. I had modified extra condensers for the ET system, they can be repurposed for the new system. Alternatively you could use a Lucas 2 condenser pack. The wire fasteners are a more modern version of wire nuts, and work very well to connect where you don't have Lucas bullet connectors to use.



1 With the alternator bolted up, find TDC on the piston closest to you. You can use a TDC tool as we did, or a soft piece of wire. When you have found TDC, mark a point on the alternator opposite the lower rotor mark. Also mark the wire or screwdriver. Measure up on the tool 8.4mm or .330 inches, this will be full advance. Rotate the engine backwards until the top mark is aligned with the spark plug hole. Make another mark on the alternator opposite the lower rotor mark. This is full ignition advance.



On the timing side of the bike, look at the points in the points cover. One set should be open and the other closed. Using a feeler gauge, set the fully opened points to .014 inches. Rotate the engine one revolution and repeat for the other set of points. You now have the points gap set correctly.



Use a small screwdriver to push the advance to fully advanced on the set of points not yet opened. They should just open as you reach the end of the travel. If they don't, or if they open sooner, move that set of points until they are just opening. Lock them down.

21 Rotate the engine one revolution and repeat the last step for the other set of points. Now you have set the static ignition timing. This bike has no easy way of doing dynamic timing, no indicators other than the ones we just put on the alternator. Later machines have a window and pointer you can use with a timing light to double check your work. The original alternator has separate ignition and lighting circuits. The new one doesn't, so starting is easier if you remember to turn off the headlight at the bucket switch. That's it. All done!



### BLACK SIDE

#### Two of the same

y interest in the storied Laverda motorcycle brand is no secret. Launched in the energetic post-World War II European market when motorcycles were the personal transportation of choice owing to their affordability, Laverda went on to become one of the most famous of the many Italian motorcycle manufacturers. Initially producing small motorcycles for urban use, Laverda found its real voice playing at the top of the game with the 2-cylinder 750cc SF series and, most influentially, a line of 1,000cc triples that included the legendary Jota, in 1977 the fastest production motorcycle in the world.

I've been a Laverda nut since my introduction to the brand in the mid-1980s when I lived in San Francisco. I was then riding a 1974 Norton 850 Commando, and was a regular in the Sunday Morning Ride, a weekly gathering of old bike nuts that started in the parking lot of the ARCO gas station in Mill Valley north of the Golden Gate Bridge. From there, riders on everything from Triumphs, Nortons, BMWs, BSAs and Ducatis would work the coast line 39 miles north to Point Reyes Station, where we'd stop for breakfast at the Station House Cafe. Among those riders was a guy on a 1983 Laverda RGS, to my eye the most beautiful piece of two-wheeled art I'd ever seen. Enveloped in arrest-me red bodywork and producing an exhaust note that sounded more like a V12 Lamborghini car engine than a motorcycle, it was to me the pinnacle of Italian motorcycle sophistication. Somehow, someday, I had to have one.

That day came some 20 years later when I got my 1983 RGS (thanks, Scott Potter), and two years ago I managed to acquire a second RGS, a 1984 with a serial number only 630 newer than my '83. Laverda didn't make many of the model, perhaps 2,500 in total, and it's estimated only around 250 were sold in the U.S., which if true means that I own just less than I percent of all the RGSs sold in the U.S. Not that that really means anything.

My '83 had just two owners, both hard-core Laverda enthusiasts who endowed it with a bit of their own opinion of what makes a great bike even better. Along the way the RGS acquired factory high-



Freshly rebuilt carbs have brought the 1984 Laverda RGS back to life after some 10 years sitting idle.

performance camshafts, reworked carburetors and exhaust, and for a time full Executive livery, Laverda's take on what a high-speed gentleman's express should be, with extra hand protection grafted onto the fairing and integrated luggage that, while fetching, fell short of being truly useful.

Likewise, the '84 had just two owners. The first was supposedly a Laverda dealer, and I don't know much about the second, who passed away years before I acquired his bike, which had been sitting idle since his death. With the benefit of experience with my '83, getting the '84 back into running condition has been a familiar process. Yet while the two are basically identical, they're quite different.

My '83's previous enthusiast ownership molded its character. Owner Number 1 loved it so much he saved all the bike's original paperwork, passing it — along with numerous photos — to me when we happened to meet up a few years

after I bought it from Owner Number 2 (the Laverda world is a small one). After I bought the bike, Owner Number 2 sent me a case of spare parts, including hard-to-find signal lenses and hydraulic rebuild kits, just because he knew I'd want to have them. I'm still occasionally in touch with both owners, which makes my ownership feel like something of a stewardship, a carrying of the torch, if you will.

What makes the '84 so different is that it doesn't have a clear story line, which is something I love about the '83, its rich history of enthusiastic ownership making it much more than just an engine with two wheels. I just got the '84 running and it's lovely, its pipes bellowing out a healthy staccato beat for the first time in years, and with any luck it will hit the road this spring, 10 years or so since its last outing. I'm looking forward to giving it some history and a new story to see it down the road. Ride safe.

Richard Backus/Founding Editor

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# GARAGE

# "The tunnel can be particularly hard to coat properly."

#### Suzuki T20 GP kit

I have a NOS GP kit temporarily set on one of my T20 projects, just to get a visual. It is two projects away from starting and I'd planned to Caswell coat the tank for ethanol protection. It will get ridden several times a year and taken to our Western VJMC rally. The tank will be drained when not ridden. My understanding is the Caswell product can be used to protect fiberglass tanks from our wonderful Cal-ethanol "gasoline." I've used it successfully on a couple of needy steel tanks. You recommended that Joe M. replace his GP tank with a steel one, and if it was never coated, I would agree. My tank has never been used and appears very solid. Would you have any reservations about my plan? I can hardly wait to get the first, of three, T20s together with the GP kit and stainless Higgspeed pipes on the road.

Mike Corcoran/via email

A: If it's a virgin tank, I'd have no reservations coating it in order to use it. Just go completely by the instructions. Being a bit paranoid, I'd probably see if there was enough in the kit to do two tanks, and do a double coat in case there were any voids in the first coat. The tunnel can be particularly hard to coat properly. Another problem area is the interface between the fiberglass and the metal bungs for the petcock taps. It will be difficult to get the perfect seal between the glass and metal. I'm not saying it can't be done, but it could be a problem. A couple of people with Norton fiberglass tanks have gone to the extreme of cutting the bottom out and coating the parts, then reassembling to assure complete coverage.

#### Triumph T150 electric start

I was reading your article in a recent copy of Motorcycle Classics about converting a Triumph T150 to electric start. I have a 1971 T150 and would like to do the same. Can you provide me with more information as to where I can buy the components (kit form?) or who might do the conversion for me?

John Damon

A: It used to be easier to find the parts from the 1975 Trident needed to convert



Ready to take your classic queries: Tech Editor Keith Fellenstein.

the earlier models to electric start. Then the idea became popular and now parts are scarce. You need the clutch basket from a T160, or a late model T150 clutch basket and the ring gear that goes on it. L.P. Williams in England has the ring gear if you have the clutch basket. I believe you can have earlier clutch baskets machined to take the ring gear, which is an interference fit on the basket.

Next you need the inner clutch cover from a T160. A quick search of eBay shows there are none currently available there. David Madigan at madigan\_analytical\_design@yahoo.com is manufacturing a cover, but it is in the early stages and not for sale as far as I know.

Finally you need a starter motor and again David Madigan is the best source. Oh, one more thing I forgot, you need three of the early Amal concentric float bowls, the ones without the drain plug. They're needed because the T150 engine doesn't slope forward like the T160/R3 engine, so there's no clearance between the starter and carburetors. You'll have to search around the various British parts shops for those. I think I'd start by contacting David at the email address above. I hope this helps. I sure enjoy my Trident more with the electric foot.

#### Mikuni mixture

I could use some help setting the mixture on my carburetors for my 1978 Kawasaki KZ650C. How many turns out on the air/fuel mixture screw do you go to adjust a Mikuni carb? Remember there are four carbs on this bike.

Brian Rhenlun/via email

A: mixture screws are set at 1.5 turns from gently closed. Start there and turn them all out 1/2 turn and see if the idle speeds up. If it does, go a further 1/2 and check again. If no improvement try a 1/2 turn in from your start position and do the same test. Once you have figured out the right direction, fine tune in 1/4 turn increments. Once you have the fastest idle, use the idle speed screw that controls all four carburetors at once set the correct speed. After that you

to set the correct speed. After that you may need to go back and double check the mixture. It can take a while to get it just right.

#### Ignition or carburetion?

I have a question about my restored 1976 Suzuki GT750A. I did a complete engine overhaul on the bike, split the cases and had the crank rebuilt, including new oil seals. The CV carbs were also rebuilt. It has happened twice now during a ride that all of a sudden I lose power on one cylinder completely. It runs on only two cylinders for a bit and while I can keep the engine going on two cylinders and play with the throttle a bit all of a sudden it kicks back in and operates like nothing happened. Could this be an ignition issue or carb issue?

Jerry Gooren, Hayden, Idaho

A: Since it's always the same cylinder, and the easiest thing to check would be ignition, I'd start like this: Rewire the coil from the constantly bad cylinder to one of the others, and swap that cylinder's coil to the bad one. See if the problem migrates to the newly assigned cylinder. If so, you have a bad coil. If the problem remains with the original bad cylinder, then you should check that cylinder's carburetor and mountings.

Email questions to keithsgarage@ motorcycleclassics.com



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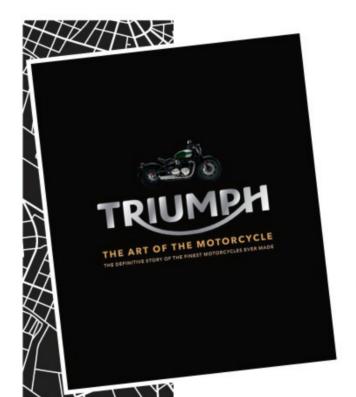
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Circle #4; see card pg 73

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From riding gear to painting services, here are six products every classic bike fan should know about.



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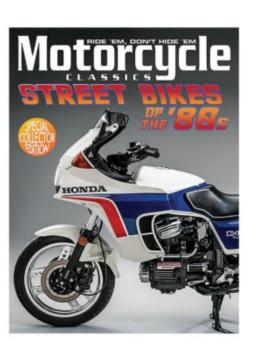
#### Handee Clamp

Old motorcycles often have hard-toreach nuts and bolts, hose clamps and other fiddly bits. The Handee Clamp is here to help. For example, we put a nut in the end and tightened the clamp, then used the tool to reach into a tough spot. The tool holds the nut while you thread in the bolt from the other side. The Handee Clamp measures 10 inches by 5/8 of an inch. Zinc coated (\$18.50) or powder coated (\$21.50). Made in the U.S.A. More info: handeeclamp.com



#### Bates Bonneville boots

Named after the Salt Flats, these new boots feature a Vibram Christy sole for serious grip and durability. Comfortable on or off the bike, these good-looking boots are available standard in chocolate brown (shown) or black, with or without the Fast Lane ankle patch. These boots can also be custom made to order with any color of leather Bates has in stock. Made in the U.S.A. Starting at \$270. More info: batesleathers.com



#### Street Bikes of the '80s

Just one of the MC Street Bikes Collection, Street Bikes of the '80s profiles some 17 of the coolest 1980s-era street bikes including the Vetter Mystery Ship, the Ducati Pantah, a collection of classic Suzuki Katanas, the Honda CX650 Turbo and many more. \$9.99. More info: MotorcycleClassics.com/store



## RIDE

### Riding shoes from Highway 21 and Cortech

#### Highway 21 Axle Riding Shoes

When it comes to motorcycle gear I freely admit that I have a problem with two things: jackets and boots. With so many variables in aesthetics and function, it's easy to spend a small fortune and fill a large closet. For the past few months, however, I've left the boot rotation idle and almost exclusively worn the new Axle Shoe from Highway 21 (highway21.com). Aesthetically, these shoes move seamlessly from the

bike to office to the local brewpub. The canvas uppers and classic high-top appearance garner compliments from motorcyclists and pedestrians alike, and the beefy sneaker format makes them comfortable enough to walk around in all day long. I even wore them all weekend at the Barber Festival without complaint!

The common axiom of moto footwear is that style must be sacrificed for protection, or vice versa. The Axle Shoe makes no such concessions. The crush-resistant, anti-slip sole prevents torsion while the dual ankle bone protectors and reinforced toe/heel boxes provide impact resilience. The thick canvas uppers with breathable mesh liner and the metal lace eyelets ensure comfort and longevity. With an MSRP of \$109.95, the Axle Shoe offers style and protection at a price that will leave you with enough cash to gas up the bike and take a long ride! — Shane Powers

#### Cortech Vice WP Riding Shoes

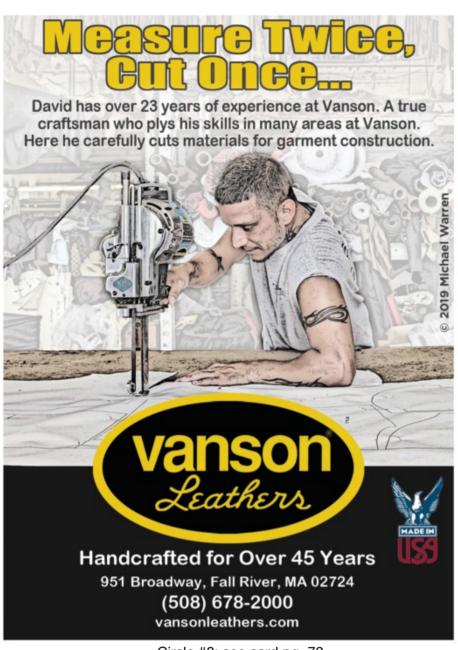
If there is one thing I have learned after attending three previous Ride 'Em, Don't Hide 'Em Getaways, it is that we spend darn near as much time off the bikes as on them on some days. So, when it came time to gear up for the 2019 event, I knew I wanted to get away from traditional riding boots and into something more comfortable for the variety of activities I would encounter.

With that in mind, I turned to our old friends at Helmet House for a pair of Cortech Vice WP Riding Shoes (cortech.net). These great looking shoes combine durable, water-resistant leather and canvas uppers with a HiPora® waterproof, breathable liner to keep your feet dry. Molded nylon ankle guards and Italian TecnoGI Thermoplastic heel cup and toe cap keep your feet protected from impact while riding. They also come with an anti-slip rubber sole with a reinforced shank for support and a reflective Cortech logo and heel trim for nighttime visibility.

I chose the white/black color combo (shades of Chuck Taylors!) over the black/black. Very stylish and appropriate with jeans in any casual setting. So, how did they feel? Virtually right out of the box, the lowers were very comfortable, almost like I had been wearing them for six months already. I had no problems tolerating them for a full day right

from the get-go. The ankle area did need a little breaking in, but that is expected due to the ankle guards.

All in all, these shoes are a great choice for casual riding and wear if you are going to be on and off the bike. And, at a \$109.99 MSRP, they won't break the bank so you can soon be styling and profiling! — Rod Peterson



Circle #8; see card pg 73

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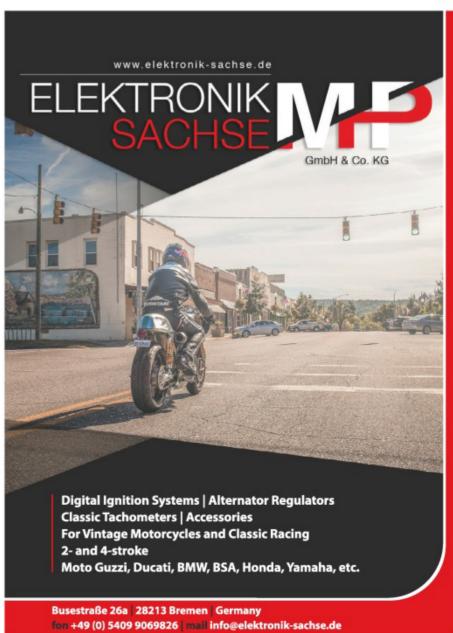
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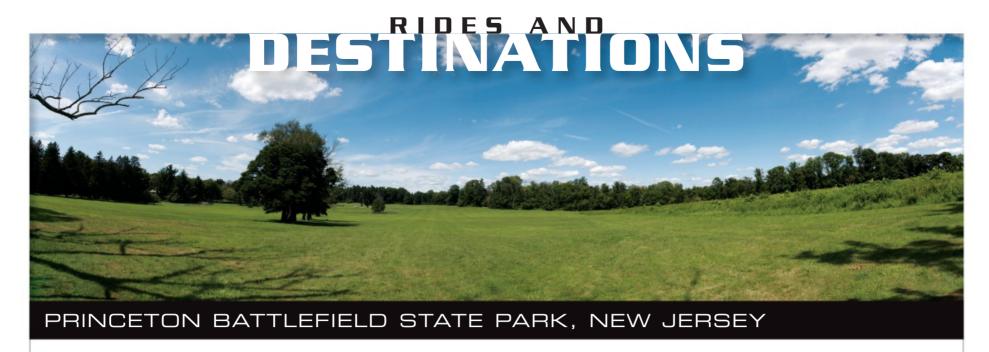
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Circle #2; see card pg 73





hen Thomas Paine said, "These are the times that try men's souls," he was referring to the American Revolution, and things were not going well. George Washington's Continental Army had not a single victory at the time that Paine uttered those famous words. All that changed during 10 crucial days starting on Christmas Day 1776. Ten days later it all came together at the Battle of Princeton, where the Americans resoundingly defeated the British and forever altered the trajectory of the American Revolution.

Back to those 10 crucial days: On Christmas Day 1776, American troops crossed the Delaware River. On Dec. 26th, Washington's Continental Army defeated the British mercenaries (the Hessian troops) in Trenton, New Jersey. On the 27th, the British retreated from western New Jersey, and on the 28th the Americans crossed the Delaware River again. On the 30th our forces took still more British prisoners. By that time, though, the American Army was shrinking significantly as enlistments expired. On the 31st, Washington offered a bounty that kept our forces intact, and on Jan. 1st, Washington attacked in Trenton yet again. We fought the British to a standstill there on Jan. 2nd, and on the third day of January in 1777, the Americans resoundingly defeated the British at Princeton, New Jersey, after marching down the road from Trenton (a road we can still ride today). Princeton was the third American victory in just 10 days and it was decisive. The Americans had not yet won the Revolutionary War, but these 10 days marked the Revolution's turning point. Times may have still been trying men's souls, but after Princeton, they were doing so on the British side.

I grew up in this area and on a recent visit to the Garden State, we visited Princeton Battlefield State Park. It is a gorgeous expanse of green fields, leafy forest, a lone white building and a beautiful white colonnade. It's just a mile or two outside of downtown Princeton. The colonnade marks a combined British and American grave site, and that lone white building is the Clarke House, a residence dating to the 1700s used as a field hospital during the Battle of Princeton (today

it is a museum containing artifacts from the American Revolution). The Princeton Battlefield Society runs regular guided walking tours of the area, and we had arrived just as a tour was starting. Our guide was Will Krakower, a recent Rutgers University graduate who made the battlefield come alive for us.

Central New Jersey and the regions in and around the Delaware River, Trenton, and Princeton are rich in historical significance and if you know where to look, you can find great riding. Our suggestion is to combine a ride to the Princeton Battlefield site with a ride along US 206 from New Brunswick to Trenton, and if you have time the next day, follow the Delaware River north along either SR 29 (in New Jersey) or SR 32 (on the Pennsylvania side) back to New Hope (see Motorcycle Classics, September/ October 2018). You'll pass right through state parks on either side of the Delaware where Washington made his famous crossings. From there, it's an easy and scenic ride along CR 518 to continue your ride through the heart of the American Revolution. — Joe Berk

What: Princeton Battlefield State Park, 500 Mercer Road, Princeton, New Jersey 08540, (609) 921-0074. Admission is free; the Clark House is open Wednesday through Saturday from 10 a.m. to 12 p.m. and 1 p.m. to 4 p.m., and Sunday from 1 p.m. to 4 p.m.

**Avoid:** Not checking the weather. The roads can ice during the winter months. How to Get There: Princeton is about 55 miles southwest of New York City. The quickest ticket in is on the New Jersey Turnpike (I-95). You can take Exit 9 to enter New Brunswick (follow the signs for SR 18 and the Rutgers campus). Pick up SR 27 in New Brunswick and follow it southwest to Princeton, and then turn left on Mercer Street (shortly after turning left on Mercer, you'll pass right by Albert Einstein's house). The Princeton Battlefield State Park is just a mile or so farther along. After seeing the Princeton battlefield site, continue on Mercer Road and turn right on Quaker Road to get back to US 206. Follow it to Trenton and the Delaware River for the great ride suggested above.

Best Kept Secret: Breakfast at PJ's Pancake House on Nassau Street in Princeton (it's where we went when we played hooky in high school, and it's still great). The pancakes and omelets are incredible.

More Photos: bit.ly/pbf-nj



A road through the forest the Continental Army used to advance upon British troops at the Princeton battlefield site.











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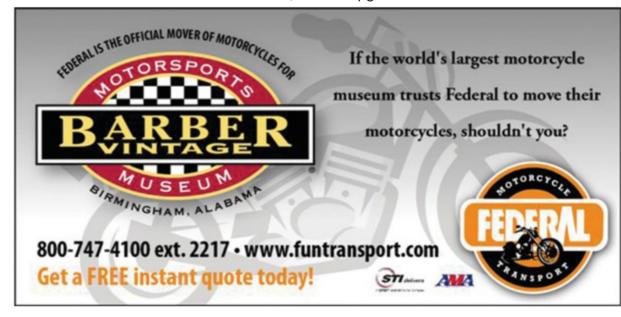
Circle #3; see card pg 73





Circle #7; see card pg 73









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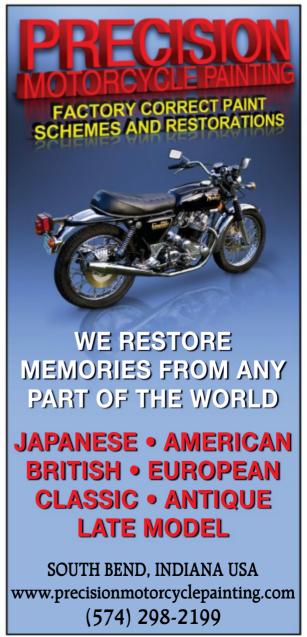
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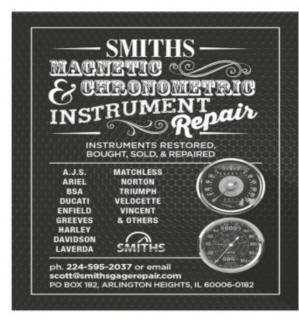


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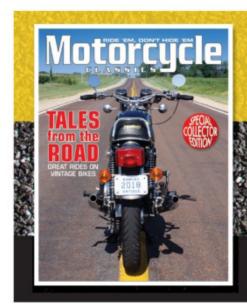












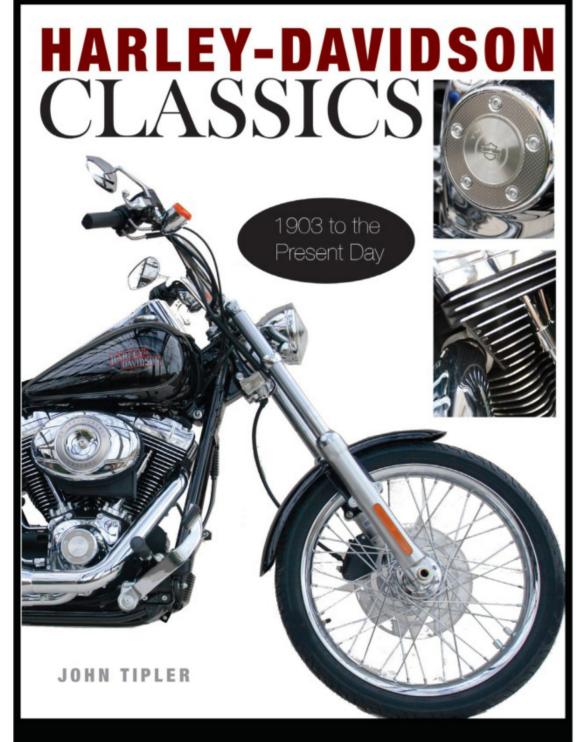
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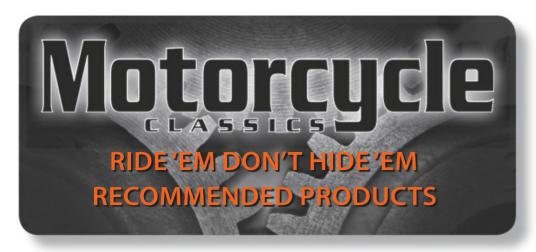


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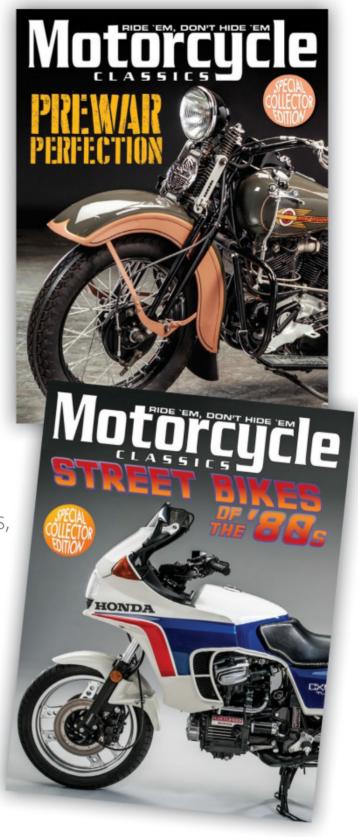


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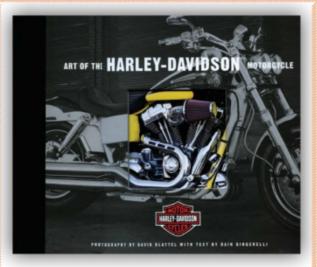




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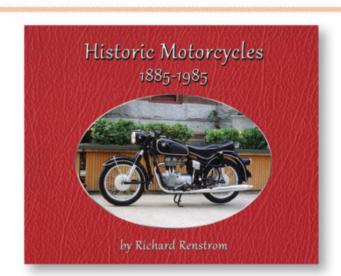
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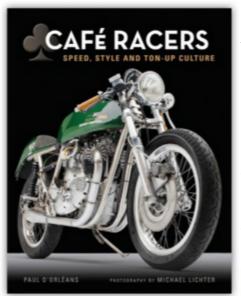
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Guzzi V7 Sport and Le

sporting motorcycles from the 1970s and

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to combine Italian

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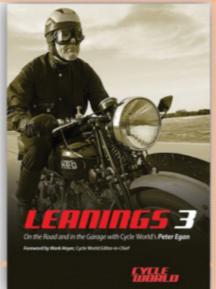
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Magnificent Motorcycle Trips

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A DUCATI SUPERBIKE RACER'S AUTOBIOGRAPHY

PAUL RITTER

FOREWORD BY COOK NEILSON

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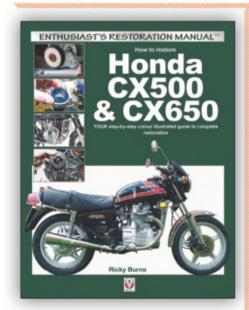




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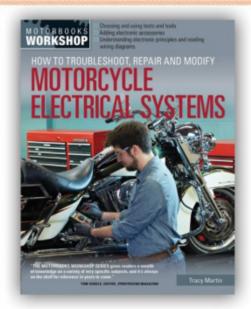




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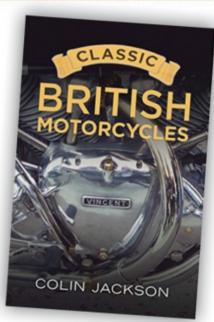
Motorcycle expert Tracy Martin provides crystal-clear, fully illustrated, step-by-step instructions for every electrical repair imaginable on a bike: from the nuts-and-bolts basics to fuel-injection systems, onboard computers, repair and installation of factory and aftermarket accessories, and everything else in between. #7707 \$39.99 \$35.99

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In the modern era, mass-produced motorcycles tend to be Japanese or Italian, with the "big four" Asian manufacturers dominating the market. However, until the 1950s, and even into the '60s, British makers such as Norton and Vincent ruled the roost. These legendary companies, and many smaller British firms, are motorcycling's founding companies. Superbly illustrated with more than 150 color pictures, many previously unpublished, this book is a captivating and highly informative account of the men, machines,

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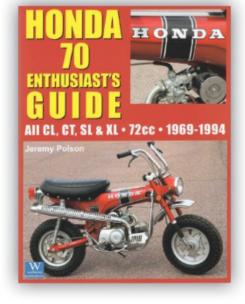


#### DUCATI 916

The 916 spearheaded the Ducati revival of the 1990s. Introduced at the end of 1993, this product took the water-cooled four-valve engine of the 851 and placed it in an evolutionary chassis with revolutionary styling.

The 916 immediately set new standards of performance for twin-cylinder machines. This book traces the development of the four-valve Ducati from its first appearance at the Bol d'Or in 1986. Along with the factory racers, all

the related four-valve models are covered in depth. All the variants, including the Sport Production series, are detailed, along with the rare Supermono. This book is your definitive guide to these legendary Ducati models.



#### HONDA 70 ENTHUSIAST'S GUIDE

Author of Honda Mini Trail: Enthusiast's Guide, Jeremy Polson has put together another vintage Honda guide. It covers the third-best-selling Honda in American Honda history, the long-running Mini Trail CT-70, along with the CL, SL, and XL 72cc motorcycles manufactured from 1969 to 1994. In addition to the hard facts, this book is filled with many rare photos that track the evolution of Honda's 72cc motorcycles and unravels their mystery.

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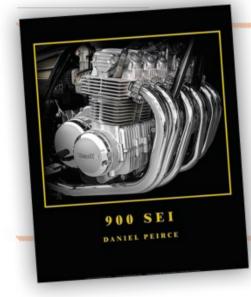
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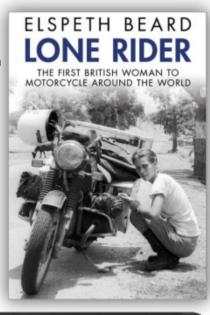
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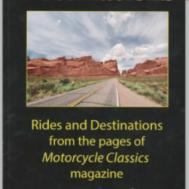
In 1982, at the age of 23, Elspeth Beard left her family and friends in London and set off on a 35,000mile solo adventure around the world on her 1974 BMW R60/6. From riding through deserts and mountain ranges to faking documents and surviving crashes, Beard tells the whole story of her ride with honesty and wit. You don't want to miss this extraordinary and moving story of a unique and life-changing adventure.

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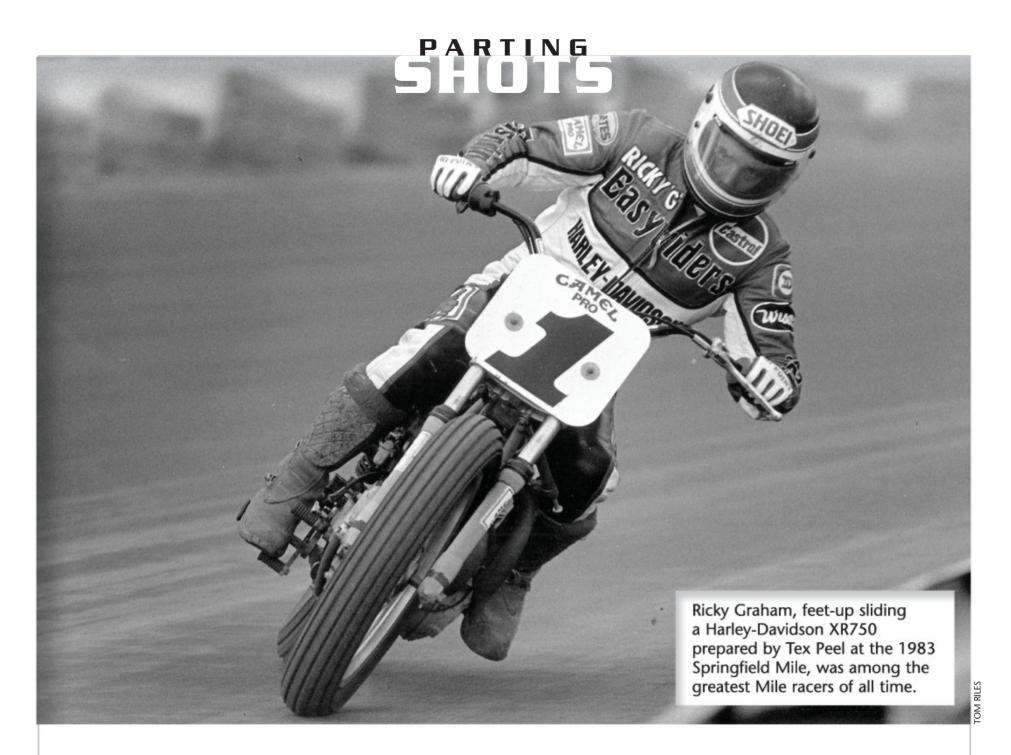
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Destinations is a collection of motorcycle rides and destinations culled from the pages of Motorcycle Classics magazine. Joe Berk is a regular contributor to Motorcycle Classics, and this book encompasses his travel stories going back as far as 2006: great motorcycle hangouts, mountain roads, national parks, best kept secrets, things to avoid, the best restaurants, and more for great rides in both the United States and parts of Baja. It's all here, inviting you to ride the best roads and the most exciting destinations in North America!

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#### The Miracle Mile

There are great flat track racers, and then there are *great* flat track racers. Consider the late Ricky Graham, who billed himself as "Ricky 'G'" during racing hours, among the *great* flat trackers of all time.

The three-time AMA Grand National Champion (1982, 1984 and 1993) set a record in 1993 with six National wins in a row that accounted for half of his 12-win tally for the season, also a record. Beyond those statistics, most of his contemporaries agreed that nobody forced a bike harder into a turn before pitching it sideways than Ricky G.

That riding style was never more evident than at Mile tracks where Graham often seemed unstoppable. Perhaps his greatest single Mile lap occurred in 1984 when, as Bubba Shobert's teammate on American Honda's fledging factory-backed team, he set an absolute lap record for any Mile, blistering around the fabled Springfield oval at the Illinois Fairgrounds in 34.548 seconds. That translated to 104.203mph, fastest Mile lap on any Mile oval by any flat track racer at the time.

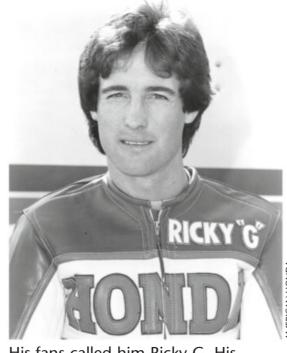
Graham's Team Honda mechanic, the late Sparky Edmonston, described that historic lap for me once, and his recital was more than inspiring. It was poetry. Edmonston's commentary also left no doubt how he felt about his rider; there was exceptional pride in his voice as he relayed to me how special that half min-

ute was. That from a man who wrenched for some of racing's greats, among them two-time AMA Grand National Champion and three-time 500cc World Champion Kenny Roberts.

"He [Graham] didn't shut off once," began Edmonston about The Lap, "and he went the whole way with his feet on the pegs." The key phrases "didn't shut off once" and "whole way with his feet on the pegs" sent goose bumps down my neck that day in 1985 when I first chronicled Graham's achievement.

Edmonston paused during his commentary to let those words sink in. Then he concluded: "It was the most beautiful thing I've ever seen." Cue the goose bumps again as we all share a moment of silence to pay tribute to one of the great flat track racers of all time.

— Dain Gingerelli



His fans called him Ricky G. His competition called him fast.



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